APPLICATION OF SCALING TECHNIQUES TO DATA ON VALUE ORIENTATIONS

By
Ann Carol Maney

Submitted as an Honors Paper
in the
Department of Sociology

THE WOMAN'S COLLEGE OF THE UNIVERSITY OF NORTH CAROLINA

GREENSBORO, NORTH CAROLINA

1953

CONTENTS

INTRODUCTION

As a basis for the understanding of attitude scaling, we ought to understand what attitudes are. Just as methods of scaling have developed through years of research, so the meanings of "attitudes" have developed. Commonly put forth definitions of attitudes have included the beliefs that an attitude is a predisposition to act in a certain manner towards something and that an attitude may be inferred from the individual's previous behavior.[1]

It is generally agreed that "opinion" should refer only to verbal behavior, while the term "attitude" may be applied to the verbal or to the non-verbal. Most attitude research is at a verbal level, however, and correlation between the verbal and the non-verbal overt behavior is unknown. Thus a scale does not directly measure opinion and attitude, but requires an expression of judgment on the acceptability of a series of verbal propositions.

1 Q. McNemar, "Opinion and Attitude Methodology," Psychological Bulletin, vol. 43, pp. 289-300.

These judgments are immediate thought processes directed partly by existing predispositions but also dependent on the situation. Thus Louis Guttman defines an attitude as a "delimited totality of behavior in response to something."[1] A condition of attitude definition, then, is the inclusion of specific behavior. Such a stipulation allows useful research on this behavior without a complete definition. Although scaling has been used mostly with attitudes, it is not strictly limited in application to attitudes, but may be applied to other behavior also.[2] If we accept Guttman's above definition, we are led to accept also his basic premise that a scientific concept must be defined in terms of observations, either directly or by analysis of the observations, and that a definition is of scientific use only insofar as it leads to objective research. Therefore, any sociological concept must be based on observations of human behavior and will be of use only insofar as the necessary observations can be made and strictly analyzed.[3] Attitude scaling is a means of accomplishing this.

1 S.Stouffer, L.Guttman, et al, Measurement and Prediction, vol. 4, chap. 2.
2 See M.J.Hagood and D.O.Price, Statistics for Sociologists, rev. ed., p. 146 for an example.
3 Stouffer, op. cit., chap. 2.

The general purpose of an attitude scale is therefore to assign to an individual a numerical value which will represent the degree of favorableness or unfavorableness of his verbal reactions to a set of statements designed to assess any given attitude. Put more generally, it is the ordering of respondents along a single dimension represented by homogeneous items. The homogeneity or unidimensionality of items means that the scale is measuring only one variable at a time. If this is not possible, the investigator should have some idea of the extent to which his measuring instrument[1] departs from the ideal of unidimensionality.

This paper attempts to deal with the field of attitude scaling in two ways. The first section discusses the major contributions to the theory of scaling. Since the Guttman technique is the latest immediately useful scaling technique, and since its development has been influenced by past techniques, this theory serves as the starting point of our discussion. It is important that the reader obtain some understanding of this technique before passing on to the earlier contributions, because many of the

1 M.M.Jahoda, et al, Research Methods in Social Relations, Dryden Press, New York, vol. 2, chap. 21.

criticisms of the earlier techniques presuppose a knowledge of Guttman's scalogram theory.

The second section begins by explaining the attitude variables involved in the particular research studies being investigated by this paper. Then a more practical presentation is made of the Guttman scale and of the related H-technique as a basis for understanding the application of these techniques in the last section. The body of the last section is concerned with testing the scalability of the particular attitudes that were being studied in a series of larger research projects.

GUTTMAN SCALOGRAM ANALYSIS

During World War II Louis Guttman, in conjunction with the Research Branch of the Information and Education Branch of the War Department, developed an approach to scaling which is known as scalogram analysis. The approach was used successfully in investigating morale and other problems of the United States Army.

A basic concept of the theory of scalogram analysis is that of the universe of attributes. A universe consists of all the attributes or qualitative variables that define the concept being investigated.

The universe can usually be considered a sub-universe of a larger universe, and can itself be divided into subuniverses. Thus complex attitudes may be broken down into component parts which are scaled, or may be parts of an even more complex universe.

The internal validity of a universe, or the extent to which the scale is measuring the variable it is supposed to measure, must be determined before its external validity, or efficiency in predicting outside variables, is studied. If the internal problems of how well a particular question represents the universe from which it was drawn and how well it discriminates proportionately among the pros and cons in the population are solved, and the content proves scalable, then the maximum predictability of any external variable may be determined easily. The external validity of the scale is, then, an empirical correlate, rather than a component, of the attitude.[1]

The purpose of a Guttman attitude scale is, therefore, to assign an individual a numerical value somewhere between two extremes of maximum favorableness and maximum unfavorableness to represent his verbal reactions to a carefully standardized set

1 Stouffer, et al, op. cit., chap. 2.

of propositions. From these assignments along a quantitative scale it must be possible to characterize the population being investigated, on all behavior involved in the definition of that attitude universe by actual observation of each individual on each item, and by finding the interrelation between items so that the whole pattern can be reproduced. If the universe contains an indefinitely large number of characterizing acts, there must be a sufficiently simple pattern of interrelationships among them to allow the whole to be reproduced fairly simply from the sample.[1]

Every set of items cannot be usefully quantified for every population, however. The reliability or error of measurement must be known. If the behavior of each individual in the given population is not sufficiently consistent for a given set of items, then the numerical values cannot efficiently reproduce the whole population's behavior.

The Guttman theory of scale analysis differs in principle from other theories of scaling. Factor analysis is a theory for analyzing the structure of quantitative variables that comes from the field of mental testing. There Spearman's original single-factor

---

1 Jahoda, et al, op. cit., chap. 21.

theory was developed by L.L. Thurstone into a multiple factor theory. These approaches are widely used to analyze the intercorrelations of many sets of variables. They were brought to attitude scaling by Thurstone and have been the basis of many techniques (including one of the most recent, Paul F. Lazarsfeld's theory of latent attributes).

Guttman, however, has ruled out the application of Spearman-Thurstone factor analysis to qualitative data on the grounds that the theory was not designed for qualitative data and will not make a complete analysis of it. The Spearman-Thurstone approach to factor analysis is entirely linear, but the qualitative data analyzed by scalogram analysis has perfect curvilinear functions which are linearly uncorrelated.[1]

Nor does scale analysis attempt to tell us how to select homogeneous items as earlier techniques did.[2] Instead Guttman's technique tells how well a set of items has been chosen for homogeneity after they have been selected.[3]

1 Stouffer, et al, op. cit., p. 192.
2 Particularly Thurstone's equal-appearing intervals and Likert's summated ratings.
3 A.Edwards, "On Guttman's Scale Analysis," Educational and Psychological Measurements, vol. 8, pp. 313-318.

There are initial steps common to all scalogram techniques. The universe of content must be defined for the attitude to be studied in order that the general content of questions to be asked may be decided. Almost any sample of about twelve cumulative[1] questions from a universe is adequate to test the scalability of the universe providing they cover the range of content designated. The population of people must be defined and sampled. Each person in the sample of the population is then observed on each question in the sample of the universe of content. If the area is scalable, a sufficiently large proportion of the population being measured respond to the scale questions in a consistent way.[2]

The criterion of consistency is that endorsement of a given item is accompanied by acceptance of all items that are less extreme and rejection of all items that are more extreme.

---

1 Cumulative items are questions so ordered that acceptance of a particular item indicates acceptance of all the preceding, less extreme items as well as rejection of all of the more extreme items.

2 L. Guttman, "The Cornell Technique for Scale and Intensity Analysis," Educational and Psychological Measurement, vol. 7, pp. 248-249.

This means that, ideally, items are ordered so that persons answering a given question favorably have higher ranks on the scale than persons who answer the same question unfavorably. Ideally, from a respondent's rank or scale score we know exactly which items he has endorsed. This principle of Guttman's theory is important to note, because no other definition of a scale includes this criterion. The relative frequency with which the individual's response can be correctly reproduced from his scale score is expressed in terms of a coefficient of reproducibility. A coefficient of reproducibility of $\neq .90$[1] has become the arbitrary, empirically determined criterion for accepting the scalability of the area.[2]

Since inconsistent responses imply that more than one dimension underlies the scale, offending items are eliminated until the criterion of consistency is met. As a result of this process, the

---

1 A reproducibility coefficient of $\neq .90$ means that nine times out of ten a subject's pattern of responses will be correctly reproduced from his scale score.

2 D. Kretch and R. Crutchfield, Theory and Problems of Social Psychology, pp. 220-224.

final items may be slight variations of the same theme and so be thought to limit the practical usefulness of the scale. There is a loss of generality, but an explicitly multidimensional study can be done to test the interrelationships of these specific scales.[1]

If data fail to fit the Guttman model, the presence of a quasi-scale or of non-scale types may be indicated. The non-scale types, as mentioned above, may indicate the presence of more than one variable. A quasi-scale is present when the errors are randomly distributed. This scale form is valuable in that correlation of its scores with an outside criterion yield the same results that a multiple correlation between responses to individual items forming the scale and the outside variable would yield.[2]

1 P. Young, Scientific Social Surveys and Research, pp. 361-364.
2 Stouffer, et al. op. cit., chap. 1.

The ranking of people by the Guttman scale model represents the content component, apparently only one of a set of principal components.[1] In the case of perfect scalability, there are as many principal components with a definite law of formation as there are scale types (or rank groups). We have already spoken of the first known component. The second component is a U-shaped or J-shaped curve, a measure of intensity in the ideal case. From the minimum point of the curve, an objective zero point can be determined. The determination of this zero point is accomplished by a process known as intensity analysis.

Intensity function is based on the concept that it is possible to measure the intensity of feeling with which people with different rank positions hold their attitudes in a scalable area.

---

1 There are only three known principal components, or functions inherent in a scale. The first component, content, is a straight line function of the rank order. The second component, intensity, is a U-shaped or J-shaped function of the rank order. The curve for the third component has one more bend than that of the second component, etc. The term "principal components" has been used here merely to place the intensity function theoretically. For a detailed explanation of principal components, see Stouffer, et al, op. cit., chap. 9.

The intensity of feeling is believed to be strongest at both ends of the content continuum and to decrease toward the middle. Therefore, by application of the technique of intensity analysis, it is possible to fix a point along the scale continuum that will divide the population into "favorable" and "unfavorable" sections. The use of this objective method of dividing the population on the variable avoids problems such as question bias that accompany a cutting point dependent on an external criterion.

Correlation of a content scale with an intensity scale produces the J-shaped or U-shaped curve.[1] The minimum point, called the zero point, of the curve represents the content rank of the persons with the least intensity of feeling concerning the attitude dimension being measured. If the curve has a broad base, the minimum point extends over several rank groups and the cutting point will not be as sharp nor as useful.[2]

---

1 A Guttman scale is constructed for intensity as well as for content, and the respondents' content scores are plotted against their intensity scores to obtain the curve of the intensity function.

2 The discussion of intensity analysis is based on L.Guttman and E.A.Suchman, "Intensity and a Zero Point for Attitude Analysis," American Sociological Review, vol. 12, pp. 57-67; and on Stouffer, et al, op. cit., chap. 1.

THE SOCIAL DISTANCE SCALE

In 1925 Emory S. Bogardus devised a technique to measure the degrees of identification and sympathy that exist in various social situations. This Social Distance Scale is composed of statements selected a priori to obtain responses indicating the extent of the respondent's acceptance or rejection of certain racial and nationality groups. Negative or positive judgments by the individual are not directly involved. Instead, reactions are elicited that are indicative of the relative willingness or unwillingness to be exposed to or identified with an object. The more unfavorable the reaction, the greater the social distance exhibited. A Bogardus scale will also yield attitude measurements to the extent of the corelation between social distance and the individual's general attitude toward an object.[1]

---

1 See E. Bogardus, "The Measurement of Social Distance," Journal of Applied Sociology, vol.9, p. 299; and G. Murphy and R. Likert, Public Opinion and the Individual, chap. 5.

The Social Distance Scale, however, is based on the judgment of one person and is thus an "arbitrary scale" -- i.e., the units of measurement between the attitude steps depend on arbitrary rather than experimental judgments. (Guttman, it will be remembered, uses responses to questions to determine the weight or rank of a question.) A large number of statements of types of social situations are formulated, and items judged to represent various degrees of social distance are selected to form the scale. A scale of races, or whatever the attitude object may be, is also given, and the subject checks on the social distance scale his first reactions to the stereotype when the object item was seen.[1]

---

1 P. Young, op. cit., p. 355.

For example:

"Directions: According to my first feeling reactions I would willingly admit members of each race or nationality (as a class and not the best I have known, nor the worst members) to one or more of the classifications which I have circled.

English	To close kinship by marriage
Negro	To my club as personal chums
French	To my street as neighbors
etc.	To employment in my occupation
	To citizenship in my country
	As visitors only to my country
	Would exclude from my country." [1]

This use of arbitrary indexes does not insure a unidimensional scale according to Guttman's criteria and is subject to the following five defects basic to the use of arbitrary indexes in an area which is not a scale or a quasi-scale. 1) The score has no descriptive meaning. In a scale every person's response to every question should be reproducible from his score, within the limits of scale error. On a Bogardus scale, however, equivalent scores do not mean similar behavior, nor does a higher index score have any special meaning in relation to a lower one. 2) There are a variety of weights that

1 M. Jahoda, et al, Research Methods in Social Relations, vol. 2, p. 189.

might reasonably be applied to an attitude (or social distance) statement. If the area is not a scale, though, the index scores from these different weights will be most likely to have a low correlation among themselves. 3) Index scores for individuals change if different items from non-scalable universes are used while a scale with a single dimension gives essentially the same rank order of people with any sample of items from the area. 4) If the area is known to be scalable, the correlation of an outside variable with scale scores will be approximately equal to the multiple correlation with separate items. There is, of course, no assurance of this when unidimensionality has not been ensured, as is the case with a Bogardus scale. 5) If an area is known to be scalable, it is also known that the addition of more items to the sample from a scalable universe will not increase the multiple correlation with an outside variable. Since this condition does not apply to non-scalable universes, a correlation based on an

arbitrary index derived from a sample will even underestimate a sample multiple correlation.[1]

Later Bogardus Social Distance Scales utilized Thurstone's judging technique to determine equidistant social situations. This meant that the statements of social relations were judged by Thurstone's method for equal-appearing intervals in terms of increasing or decreasing social nearness. The small number of items so selected were considered evenly spaced according to the judges' ratings, but were also subject to the faults or lacks of Thurstone's technique.[2]

The Bogardus scale has been of value in that it is striving for cumulative items to show various degrees of social distance. Its arbitrary weighting scheme is not as refined as Guttman's but the idea of cumulative items represents an important theoretical advance.

---

1 Stouffer, et al, op. cit., chap. 6.
2 See a later section of this paper on the disadvantages of the equal-appearing intervals technique.

PAIRED COMPARISONS

The method of paired comparisons, developed by L.L. Thurstone and others, was Thurstone's initial contribution to scaling techniques. According to Guttman the purpose of scale analysis is to attempt to reproduce by a single rank ordering of people their attitudes toward a single universe of items. The method of paired comparisons has a related but different purpose. It tries to determine the average differences between people's attitudes toward several universes of items in order to discover if the average attitude of a population toward one object is higher than its average attitude toward another object. The technique is usually, therefore, a multiple factor problem with respect to individual responses.

In this method the assumption of the normal distribution of attitudes is introduced. Final weights assigned by paired comparisons represent an average of the scores of the population on that object being judged. Based on the above mentioned assumption of normality, the method attempts to devise weights for the attitude objects that will reproduce the proportion of

people who say one object should be higher than the other for all of the judgments. It is, therefore, the objects whose ranking is analyzed, but in the more conventional forms of scale analysis it is the people or the internal structure of the separate attitudes that is analyzed.

An example of the use of paired comparisons is found in the examination made by the Research Branch of the point system for demobilization of men from the Army.

> "The problem was to assign weights to the four factors considered important by the soldiers with respect determining who should be released from the Army first: length of time in the Army, length of time overseas, amount of combat, and number of children. Should a battle receive less weight or more weight than a baby? Should a month of service overseas count the same as a month of service in continental United States? These were the kinds of questions to be resolved in the light of the attitudes of the enlisted men."[1]

---

1 Stouffer, et al, op. cit., p. 189.

There is a more recent approach to the method of paired comparisons which makes no assumptions about normal distribution or any other type of distribution. Instead it centers on the reproduction of each individual's judgment, not merely that of group proportions of judgments.

It must be remembered that the method of paired comparisons cannot be criticized on the same level as the Social Distance Scale or the method of equal-appearing intervals, because it deals with a different, though related, problem. The technique of paired comparisons attempts to show the relation between the average attitude of a population toward one object and its average attitude toward any of several other objects.[1]

EQUAL-APPEARING INTERVALS

One of the earliest achievements in combining systematic theory with computational techniques in the area of attitude measurement was L.L. Thurstone's application of suitable

---

1 This discussion of paired comparisons is based on Stouffer, et al, op. cit., chap. 6.

psychophysical methods. Theoretically this method of scale construction could be developed to measure attitudes toward any social object or issue. It attempted to represent the attitude of a group on a specific issue by means of a frequency distribution, the base line indicating the complete range of attitudes from the most to the least favorable with a neutral zone between.[1]

The method consists of the following steps. 1) A large number of simple, dichotomous statements about the issue in question are collected and edited. 2) The statements are ranked by a large group of judges, usually in eleven piles, so that they represent a scale ranging from extremely unfavorable to neutral to extremely favorable. The judges are instructed to rank the statements not in terms of their own opinion, but in estimation of the degree of favorableness and unfavorableness that would be exhibited in endorsement by the population of individuals to be studied.

1 D. Kretch and R. Crutchfield, op. cit., p. 215.

3) The number of judges placing each item in each category is tabulated. 4) The consistency of the judges' rankings is analyzed in two ways. All the items are rejected that are found to be ambiguous or faulty because of insufficient agreement among judges as to proper scale position.[1] A scale score, usually the median scale position, is assigned to each remaining item. For example:

"Scale value	Item no.	
10.3	1	I consider that the native is only fit to do the 'dirty' work of the white community.
.	.	. . .
.	.	. . .
0.8	11	I would rather see the white people lose their position in this country than keep it at the expense of injustice to the native."[2]

1 See A. Edwards and K. Kenny, "A Comparison of Thurstone and Likert Techniques of Attitude Scale Construction," Journal of Applied Psychology, vol. 30, p. 72 for a simple explanation of the construction of the ogive and determination of Q to find the coefficient of ambiguity.

2 M. Jahoda, et al, Research Methods in Social Relations, vol. 1, pp. 191-192.

5) A final selection is made among the remaining statements so the items will be spread rather evenly along the scale.[1]

There seems to be a great deal of controversy over Thurstone's assumption that the determination of scale values will be independent of the attitudes of the sorters or judges toward the issue.[2] Guttman's contention is that scores obtained from judges' weights, because they reflect the behavior of judges and not of respondents, do not represent the responses of the respondent.[3] In general, then, the predictive power of the items is lost by the use of the judges' weights, which are not the invariant quantifications of the respondent's answer which is necessary for external prediction.

---

1 L.L. Thurstone and E.J. Chave, The Measurement of Attitudes, p. 65f.

2 See L.W. Ferguson, "The Influence of Individual Attitudes on the Construction of an Attitude Scale," Journal of Social Psychology, vol. 6, pp. 115-117; E.D. Hinckley, "The Influence of Individual Opinion on the Construction of Attitude Scales," Journal of Social Psychology, vol. 3, pp. 283-296; and McNemar, op. cit., p. 301 for studies supporting this assumption.

3 This contention is supported by studies cited in A. Edwards and K. Kenny, op. cit., pp. 72-83.

Guttman tells us that no necessary relation was found between the weights assigned by judges and the pattern of behavior of the respondents. The concern of the Thurstone method is, therefore, with the consistency of the judges' statements, not with the consistency of the behavior of the respondent. As a result, in general, it is impossible to reproduce the response to each of the questions from a score obtained by the equal-appearing intervals method, so that a scale in the sense of reproducibility from scale scores is not present.[1]

Since a scale of respondent's behavior is not yielded, all the problems of non-scalable areas are inherent in the items. This does not, however, rule out the utility of the technique. Its rationale does differ considerably from that of Guttman scale analysis, a later development in attitude scaling, but the two theories can be considered as being devoted to separate problems, each one appropriate for its own purpose.

1 Stouffer, et al, op. cit., chap. 6.

The utility of Thurstone's Method is in the study of the judgments of people in comparing various things, but it is inappropriate for the study of the internal consistency of people's actual responses.[1]

There are other criticisms of the equal-appearing interval method. The method is extremely laborious. Yet it fails to select from within each scale interval the most discriminating items. The units along the continuum are actually unequal, but then Thurstone only claimed equal "appearing" (meaning approximately) intervals. However, units cannot be added or interchanged along the continuum. The comparability of scales constructed by this method has not been sufficiently well demonstrated to allow direct comparison of means based on different scales. Endorsed statements are scattered over a wide range on the continuum and include many "neutral" items which tend to lower the reliability and decrease the reproducibility of the set of items finally selected.[2]

---

1 Ibid.
2 A. Edwards and L. Kilpatrick, "A Technique for the Construction of Attitude Scales," Journal of Applied Psychology, vol. 32, p. 382.

ITEM ANALYSIS

A somewhat different approach was made by R. Likert in 1932. 1) The method obtains statements of opinion edited by informal criteria that emphasize values which clearly indicate a positive or negative position concerning the point at issue. 2) The propositions are next presented to subjects who respond in terms of five scale alternatives ranging from "strongly agree" through "agree", "undecided", and "disagree", to "strongly disagree". 3) Weights from one through five are applied to these alternatives.[1] 4) The total score for each subject is obtained by summing the values of each item checked. 5) The amount of correlation between each item and the total score is examined and those items with insufficient correlations are eliminated. In this test of internal

---

1 This method yields essentially the same reliability coefficient as Thurstone's sigma method and correlates (r=.99) with that method. See R. Likert, "A Technique for Measuring Attitudes," Archives of Psychology, vol. 22, pp. 1-55.

consistency, an examination is made to find the individual items that differentiate between two criterion groups composed of the upper and lower ten percent of the population in terms of total score. 6) Reliability is determined by the split-half method of correlating scores of odd against even items.[1]

This Likert technique is very similar to Thurstone's equal-appearing intervals except in the determination of scale values. Here Thurstone seeks a reasoned scale based on the placement of items by judges, while Likert takes a more pragmatic approach and selects items in terms of how well they work when administered to a group of respondents. Both provide techniques for selecting from a large group of initial items a set of items to be used as a measuring instrument.[2]

---

1 Kretch and Crutchfield, op. cit., pp. 217-219.
2 Edwards and Kilpatrick, op. cit., p. 374.

Likert's technique has certain advantages over Thurstone's. A Thurstone score represents an individual's central tendency to favor or oppose something. A Likert score is also influenced by the number of favorable and unfavorable responses, as well as by the consistency and intensity of these responses.[1] The Likert scale also yields more information, in that it provides data on the individual's attitude about a specific issue and provides the total score on the dimension being studied. Thurstone and Likert scales, independently constructed from the same original items, yield high correlations, but the Likert scale is much easier to construct and still gives results comparable to those obtained by the Thurstone method. In terms of the application of the criterion of relevance to the items, the rationale of both methods is fairly well developed, so that there is little theoretical basis for choice. In practice though, the Likert

1 T. Newcomb, Social Psychology, chap. 5.

scale yields a higher coefficient of reliability with fewer items. In addition the difficulties and errors encountered by the use of a judging group in constructing the scales are avoided.[1]

Item analysis is based on the following rationale. The items are all an indication of some central variable. The problem is to obtain the person's score on this variable. If there is an external measure of the variable available, it is possible to use item analysis to select and score items. If there is no observable variable external to the items, why not obtain a variable from the items themselves? Thereupon the scores are summed and the total score is used in place of the external variable. Item analysis, therefore, does not describe the internal consistency of data, if that term is used to mean the reproduction of items from the total score. It does investigate the extent to

---

1 A. Edwards, "A Critique of 'Neutral Items' in Attitude Scales Constructed by the Method of Equal-Appearing Intervals," Psychological Review, vol. 53, pp. 159-160.

which the total score can be estimated from each item reply. In item analysis it will be found that items discriminate regardless of the scalability of the area, because the only requirement is the significant correlation of scores on items. The reproducibility of items from scores is not required. Therefore it is possible that a Likert scale will have, not a single dimension, but merely items that correlate among themselves. This means that all the problems of non-scalable areas belong, in general, to areas examined by item analysis also.[1]

Despite the inadequacies of item analysis in the description of internal consistency, item analysis is most helpful in the prediction of an outside variable, the field in which it originated. Likert, in his technique of summated ratings, was the first to apply the method of internal consistency or to emphasize the importance of each item as a scale in itself.[2]

1 Stouffer, et al, op. cit., chap. 6.
2 Young, op. cit., pp. 358-361.

THE THEORY OF LATENT ATTRIBUTES

It will be remembered that Louis Guttman denied the applicability of Spearman-Thurstone factor analysis to qualitative data. He believed that factor analysis was designed for quantitative data, that it was theoretically unsuited to and would give only an incomplete analysis of qualitative data. Although Paul F. Lazarsfeld's theory of scaling was developed later than Guttman's, it has gone back to dependence on the theory of factor analysis. Lazarsfeld's theory of latent structure is a generalization of factor analysis. It postulates that there is a set of latent classes corresponding to the factors in factor analysis that underly the manifest relationship of items on a questionnaire.

A particular response has two components. One is associated with the latent classes; the other is the specific component of any item. The latter is assumed to be independent of the latent classes and also independent of the specific component of any other item. All possible responses can be evaluated in terms of the latent classes.

Lazarsfeld, then, defines an attitude as an inference concerning latent classes. Therefore the latent attitude is an intervening variable which one merely hypothesizes. It is tested by fitting an appropriate latent structure model to the manifest data. The models thus make it possible to compute the probability that a given response pattern will be given by a member of a particular latent class.

These formulations of factor analysis eliminate the necessity of relating by correlations. The only necessary mathematical concept in Lazarsfeld's approach is that of the independence of variables.[1]

Guttman's quasi-scale can be derived analytically as a specific case of latent structure analysis. His perfect scale is, however, a limiting case. It requires discrete probabilities of unity and zero in the relation of rank to scale type and therefore implies that the manifest variables are discrete. In fact, Guttman's belief that qualitative data are composed of non-continuous

---

1 This discussion is based mostly on Stouffer, et al, op. cit., chap. 1 and on S. Stouffer, et al, "A Technique for Improving Cumulative Scales," The Public Opinion Quarterly, vol. 16, pp. 277-278.

manifest attributes has been a basis of his objections to the direct application of factor analysis to qualitative variables. He has disagreed with the concept of latent classes as such, because he believes Lazarsfeld applied continuity to a case where all things occur at a single point.[1] That is, all the responses falling within a given rank group have the same manifest value or score derived from the ordering of the rank groups. The distance between this rank or score and any other is unknown, but the order of the ranks is known. Guttman's model deals only with the manifest relationships among attitude items, and it defines an attitude directly as the observed responses to these items. The scalogram does not define the content of the attitude, but it does analyze the formal structure of the interrelationships of items having that content.[2]

---

1 Stouffer, et al, Measurement and Prediction, vol. 4, chap. 6.
2 L. Guttman, "On Festinger's Evaluation of Scale Analysis," Psychological Bulletin, vol. 44, pp. 451-519.

VARIABLES USED IN THE ATTITUDE STUDIES BEING INVESTIGATED

The analysis done in this second section is part of a larger research enterprise composed of a series of projects carried out by the class in "Methods of Social Research." These projects, represented by three separate questionnaires, were concerned with the assessment of certain value orientations which are amenable to scaling, just as attitudes are.

Value orientation refers to those facets of an individual's orientation which commit him to observe certain norms or standards and certain criteria of selection, whenever he is faced with a situation requiring choice.[1]

The constructors of the three questionnaires studied in this paper were concerned with a self-collectivity variable and an instrumental-expressional variable. These are directions of value orientation defined by Talcott Parsons.[2]

---

1 T. Parsons and E. Shils, Toward a General Theory of Action, pp. 58-76.

2 See Questionnaire #3 for more specific situations containing these variables. The first twelve questions contain self-collectivity orientations, and the second twelve questions measure the instrumental-expressional variable.

Self orientation is the "...(orientation) on the part of the ..(individual) to permit himself to pursue a given goal or interest of his own ... without regard to its bearing one way or another on the interests of the collectivity of which he is a member."[1] Collectivity orientation is an " .. (orientation) on the part of the actor to be guided by the obligation to take directly into account, in the given situation, values which he shares with other members of the collectivity (solidary group) in question. (It is) the expectation by ego that in the particular choice in question he will subordinate his private interests to those of the collectivity."[2]

1 Parsons and Shils, op. cit., p. 81.
2 Ibid.

"Problems of instrumental ..(orientation) concern relationships with alters which ego engages in, not primarily for their own sake, but for the sake of goals other than the immediate and direct gratification experienced in contact with the object."[1] Expressional orientation, on the other hand, is ".. concerned, not with goals beyond the immediate action context, but with the organized gratification in relation to cathected objects."[2]

The questions incorporated in all three of the questionnaires pose specific situations in which there is conflict between two opposed value orientations. The respondent is required to choose between the orientations. The problem is then to determine whether or not the questions have a cumulative property --i.e., form a Guttman scale, so that it can be determined whether or not the questions are all measuring the same variable.

1 Parsons and Shils, op. cit., p. 209.
2 Ibid.

THE GUTTMAN SCALOGRAM TECHNIQUE

Our initial decision was that of applying Guttman's technique of scale analysis to the variables being investigated. The reasons for so doing were both methodological and theoretical. 1) We had derived our variables from Parson's theory of action and were accepting therefore his concept of a pattern variable as a dichotomy.[1] This fitted in with Guttman's premise that attributes or qualitative data are not continuous variables and are not to be treated as such.[2] 2) We were interested in ranking the respondents to the questionnaires on the variables and thus determining how well our items met the test of unidimensionality. 3) We were assuming that the orientation areas which were being investigated contained cumulative items. It is considered possible that only a limited range of psychological and sociological phenomena have this "intrinsic cumulative character" necessary for scalogram analysis, so that we were also actually testing our assumption of this.[3]

1 Parsons and Shils, op. cit., p. 77.
2 Stouffer, et al, Measurement and Prediction, vol. 4, chap. 6.
3 Edwards, "On Guttman's Scale Analysis," Educational and Psychological Measurements, vol. 8, pp. 313-318.

4) We wanted a score that would characterize each subject's responses and that would enable us to relate his position in the area to outside variables. 5) We were taking advantage of the most recent developments in qualitative analysis and were testing their applicability to the data being studied.

Guttman and his co-workers have developed four techniques of scale analysis. They are: 1) The least squares method, which is too laborious to apply to the many items and categories present in our data. 2) The tabulation technique which involves the graphic representation of each question. This technique is more rigorous than one of those utilized, but it requires more beforehand knowledge of the responses and is not so clear or simple in its presentation of ranks, errors or conformity to the ideal. 3) The Cornell technique which was used in our analysis because of its ability to locate the error in questions.[1]

---

1 See Guttman, "The Cornell Technique for Scale and Intensity Analysis," Educational and Psychological Measurement, vol. 7, pp. 247-279 for a clear explanation of the methodology involved.

4) The scalogram board technique which was also utilized.[1] All four are based on the scalogram theory, and all four produce essentially the same results.

The fourth technique, the scalogram board technique, was the one most used by the Army Research Branch, and is seemingly the most useful and the least laborious. The procedure involves several basic steps. 1) The initial arrangement of items .... The responses to the set of questions being tested for scalability are tabulated. The order of the questions is determined by the frequency of "positive" (favorable) and "negative" (unfavorable) responses. (In our questionnaires we treated self and instrumental responses as positive and collectivity and expressional responses as negative.) Then the questions are ranked from left to right at the top of the paper from the question with the lowest frequency of "positive" (self or instrumental) responses to the question with the highest frequency of "positive"

---

1 The term scalogram analysis may also be used to denote the general procedure of the scalogram board technique.

responses. The ordering is then continued from the question with the highest "negative" (collectivity or expressional) frequency to the question with the lowest "negative" frequency.

2) The ranking of <u>respondents</u> .... The respondents are first ranked vertically from those with the most favorable responses to those with the fewest favorable responses. This is accomplished by applying approximate weights to the answer categories within a question. (In our case, +1 for a "positive" response, 0 for a "negative" response. A more complicated weighting scheme as well as eventual combination of answer categories would be necessary except that we have used only dichotomous items for content scaling.) The score of each rank group can be represented by a perfect scale type. Let N equal the number of questions. There are N + 1 rank groups or perfect scale types.

Thus if there are three questions, there are four perfect scale types which arrange themselves in such an order because of the cumulative nature of the questions. For example:

Let X equal a positive response

	Least to most positive responses Questions			Most to least negative responses Questions		
Rank	1	2	3	1	2	3
1	X	X	X			
2		X	X	X		
3			X	X	X	
4				X	X	X

From this illustration one can see the parallelogram shape of the perfect scalogram.

Any responses which do not correspond to a perfect scale type are moved to the rank groups in which they will have the least error -- i.e., the smallest number of replies that do not conform to the scale type. Thus:

given: XX-X

possible placements: XXXX one error
---X two errors

correct placement: XXXX

There are other rules governing the placement of responses containing error. Among the scale types: 1) put all scale types with errors in the same place together; 2) if a respondent will fit into any of several scale types equally well (with minimum error), he is placed in that scale type closest to the middle of the rank order -- i.e.,

given response: X-X-

possible but incorrect placements: ----
XXXX

correct placement: --XX

Within each scale type: 3) those respondents with error near the center columns (the questions with the highest frequency of positive responses and with the highest frequency of negative responses) are placed above those with error further away from the center columns; (For example:

least to most positive responses	most to least negative responses
X X X X	- - - -
X X X -	- - - X
X X - X	- - X -)

4) responses within the rank group are arranged so that error occurs in unbroken columns or "solid streaks." This rule takes precedence over all others. It is important because it helps in determining the randomness of error.

The scalogram so constructed is tested for the existence of a scale in terms of four main criteria: 1) the coefficient of reproducibility 2) the number of items and the number of response categories 3) the range of marginal frequencies

4) the pattern of error. The coefficient of reproducibility is calculated in terms of the amount of error or deviation from perfect scale types present. The formula is:

$$\text{Coefficient of reproducibility} = 1 - \frac{\text{number of errors}}{(\text{number of questions}) \cdot (\text{number of respondents})}$$

It must be remembered, however, that the coefficient of reproducibility alone is not enough to determine the scalability of an area. The other criteria must also be taken into consideration.[1]

THE H - TECHNIQUE

It has been suggested that orientations are not amenable to analysis by a Guttman scale. The proponents of this viewpoint base their claims on a criticism of the specific nature of the dimensions which meet Guttman's rigorous criteria of scalability.[2]

---

1 For a more complete explanation of the scalogram board technique, see Stouffer, et al, Measurement and Prediction, vol. 4, chap. 4.

2 For an example of the extremely specific, non-attitudinal areas to which Guttman's technique can be applied, see Hagood and Price, op. cit., p. 146f.

Questions measuring orientations, on the other hand, require the respondent to project himself into particular situations in which the orientation is a subtle, non-factual element.[1] The subject may respond to the irrelevant specifics of the questions rather than to the general variable underlying all the questions on the schedule. The H-technique is a method, less rigorous than Guttman's, which makes it possible to measure more general variables. When it seemed that the dimensions we were analyzing were too general or too subtle to meet Guttman's criteria of scalability, we utilized Samuel Stouffer's H-technique.

The objective of Stouffer's technique for improving cumulative scales is to make the most of the information available from basic data.

---

1 See the questions in Questionnaires #1, #2, and #3 for examples of the type of question being considered.

Reduction of scale error and consequent improvement of subjects' ranking, and greater confidence in the scalability of the area and in the generality of the dimension ought to result. The method simply combines several single items from a Guttman or Lazarsfeld scale into a new contrived item.

Guttman requires ninety percent reproducibility for a scalable area, as well as a random pattern of errors and fewer errors per item than the number of positive, or negative, replies. Many scales have been constructed that meet these minimum requirements. Sometimes, however, information is lost in obtaining a scale through the elimination of items or through the combination of response categories within an item.

It is possible that out of twelve or so original questions only four or five form a scale. It is very probable that unless the scale is completely reproduced, there may be overcapitalization on chance. It is also possible that the small number of remaining items scale because they have something (such as content or form) highly specific in common

and so lack the generality in meaning that the investigator usually seeks. These criticisms have led to an insistence that ten to twelve items form an initial scale, no matter how few of these be selected for eventual practical application.

A ten or twelve question cumulative-type scale is very difficult to construct, however. As the number of scale items is increased, the number of non-scale types is also increased, so that there is more ambiguity in the ranking of respondents. The closer the frequencies of some of the original items, the more likely it is that the rank order of the items will vary from sample to sample. If the cutting points of the scale are placed more widely, these reversals can be avoided.

The H-technique thus uses two or three items, instead of one, to determine a given cutting point. The new, or contrived, item formed by the two or three original questions can be scored in two ways. An individual can receive a positive score on the contrived item if he answers a majority of the composite questions favorably.

Or the conventional Guttman procedure can be applied to the contrived item, together with other contrived items, to determine the best cutting points.

The application of the H-technique to data that fit Lazarsfeld's latent distance model (and so too the Guttman quasi-scale) results in increased: 1) coefficient of reproducibility, 2) probability of perfect scale types, 3) proportion of cases that can be ranked unambiguously, 4) test-retest reliability. Although these expected gains are large, the H-technique cannot be expected to save situations where the initial item error is much greater than twenty percent.[1]

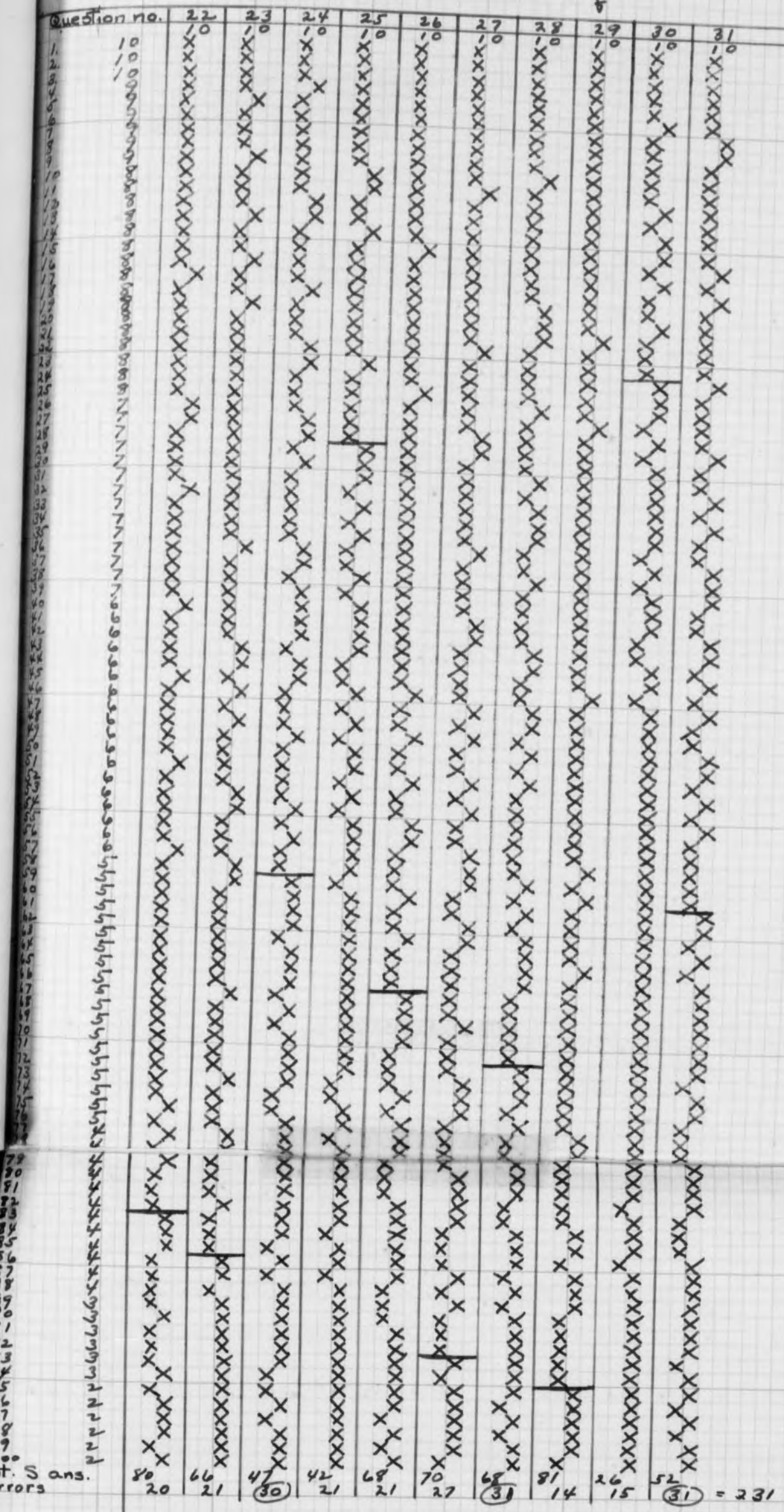
QUESTIONNAIRE #1

The first questionnaire was constructed in an attempt to test the scalability of the self-collectivity pattern variable. The Cornell technique yielded a coefficient of reproducibility of .77. Questions 24,28 and 31 showed the greatest amount of error. As result, these items

---

1 The discussion of the H-technique is based on material recently published in Stouffer, et al, "A Technique for Improving Cumulative Scales," The Public Opinion Quarterly, vol. 16, pp. 273-291.

Questionnaire #1
Cornell Technique



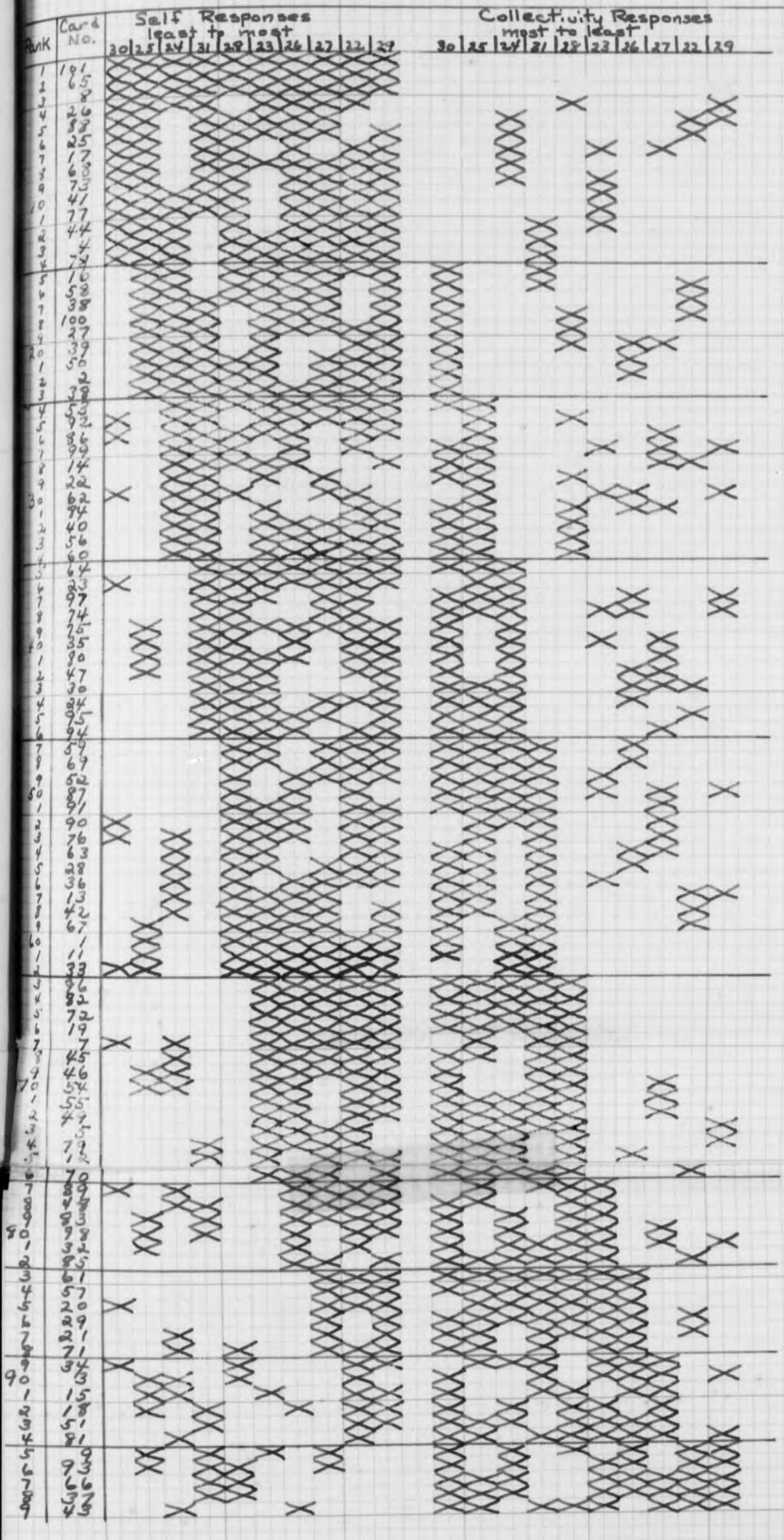
23 % error

.77 Coefficient of reproducibility

Questionnaire #1

Guttman Scale

Self - Collectivity Questions



Error:

Ques.	No. of errors
30	11
25	18
~~24~~	~~23~~
21	16
28	16
23	14
26	17
~~27~~	~~23~~
22	15
29	~~13~~
	166

Coef. of reprod. $= 1 - \frac{166}{10 \times 99}$

$= .83$

were immediately suspected of being poor measures of the variable.

The scalogram method was then applied to the data which yielded a coefficient of reproducibility of .83.[1] The scalogram was examined in terms of the criterion for a quasi-scale, namely that, no matter how low the reproducibility, there be random distribution of error. Considering the large number of items, the non-scale types on this scale appeared to be randomly allotted. It was concluded, therefore, that a quasi-scale was present and would be of value in relating the data to any external variables obtained from other parts of the questionnaire schedule as well as for the information obtained from examination of the error.

Questions 24 and 27 were found to have greater than twenty percent (20%) error while question 25 was slightly suspect with eighteen percent

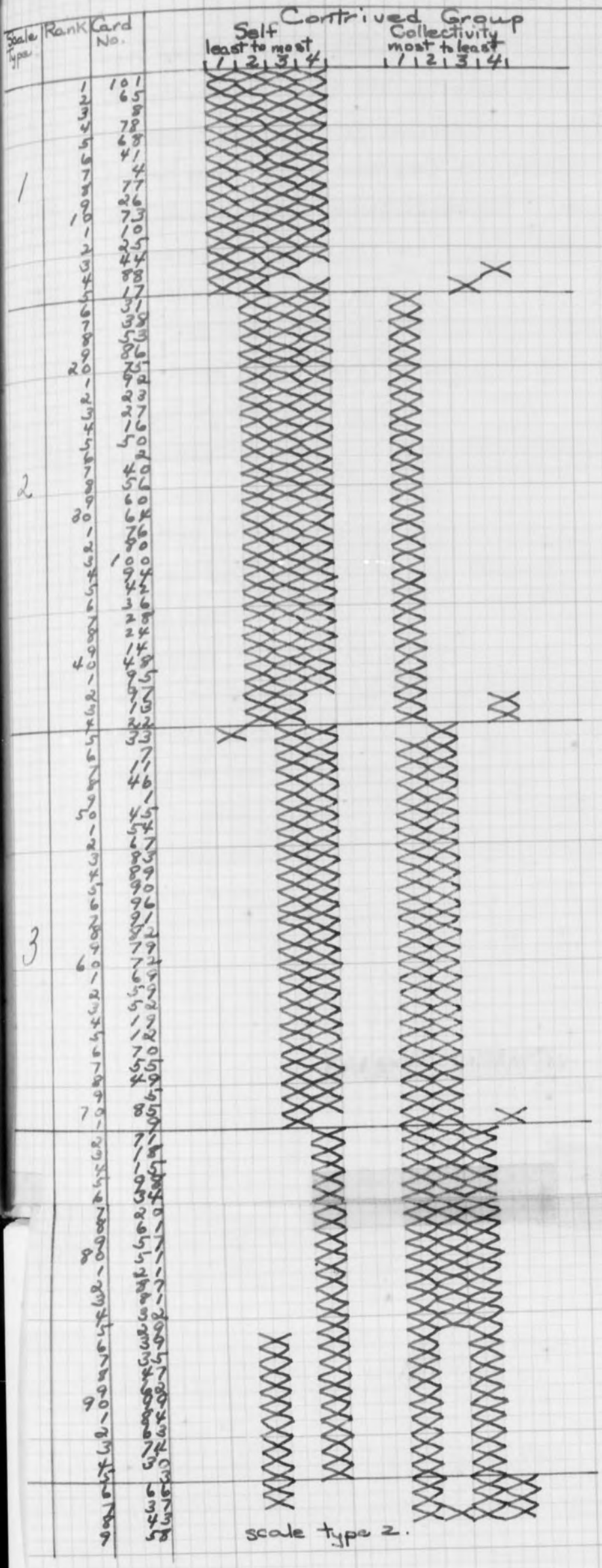
---

1 The scalogram board technique provides for the manipulation of responses to allow assignment to the rank group in which they will have a minimum amount of error. As a result, this method of scalogram analysis yields a slightly higher (usually about 5) coefficient of reproducibility than the less flexible Cornell technique.

(18%) error. Of course too much faith cannot be placed in the amount of error indicated for a question by the scalogram, because there are frequently scale types which will fit equally well into any of several rank groups, even when the rules are closely followed. Altogether four questions out of the ten contained a disproportionate amount of error. They were questions 24, 27, 28 and 31. (See Questionnaire #1) At this point it becomes evident that inspection of the scale pattern alone is not enough. The scalogram must be related to the attitude variable being measured in order to obtain maximum value from the technique. The questions which the scaling process points out as suspect in terms of error ought to be examined with reference to the definition of the attitude dimension being studied. The resulting theoretical speculations may result in refinement of the questions or of the definition.

From the pattern of error observed in the scale area analyzed above, one might suppose that obligation to the group is not made strong enough nor specific enough in these questions. It might

Questionnaire #1
H-Technique



Coef. of reprod. $= 1 - \frac{\text{no. of errors}}{\text{no. of ques.} \times \text{no. of resp.}}$

$= 1 - \frac{18}{4.99}$

= 95% reproducibility

5% error

Contrived group	Ques.
1	30, 25
2	24, 31, 28
3	23, 26, 27
4	22, 29

very well be that obligation to friends and obligation to family are different dimensions and are not both measuring collectivity orientation. At any rate, these questions were dropped from consideration in the construction of the next questionnaire measuring the self-collectivity variable.

In hope of obtaining an improved scale from this first questionnaire, the application of Samuel Stouffer's H-technique to the data was considered as the next step. The criteria for application of the technique are: 1) a percentage of error of no more than approximately twenty percent or a coefficient of reproducibility of about eighty percent 2) the initial items composing a contrived item should have about the same frequencies 3) a substantial gap between the contrived items (for example, the gap between items 25 and 24 below).

These criteria seemed to have been met well enough in our data to justify application of the procedure. We had obtained a quasi-scale

with a reproducibility of ≠.83 with the scalogram, and the frequencies of the items grouped themselves in the following manner.

Item	Frequency	Range
30	73)	15
25	58)	
24	51)	10
31	46)	
28	41)	
23	33)	3
26	30)	
27	30)	
22	19)	1
29	18)	

The ranges covered by the frequencies within each of these groups were not approximately equal, but the frequencies within each contrived grouping were comparatively close and were less than the gaps between the categories. Since we were dealing with dichotomous questions, there was no other way of manipulating the items in order to approximate more closely Stouffer's standards.

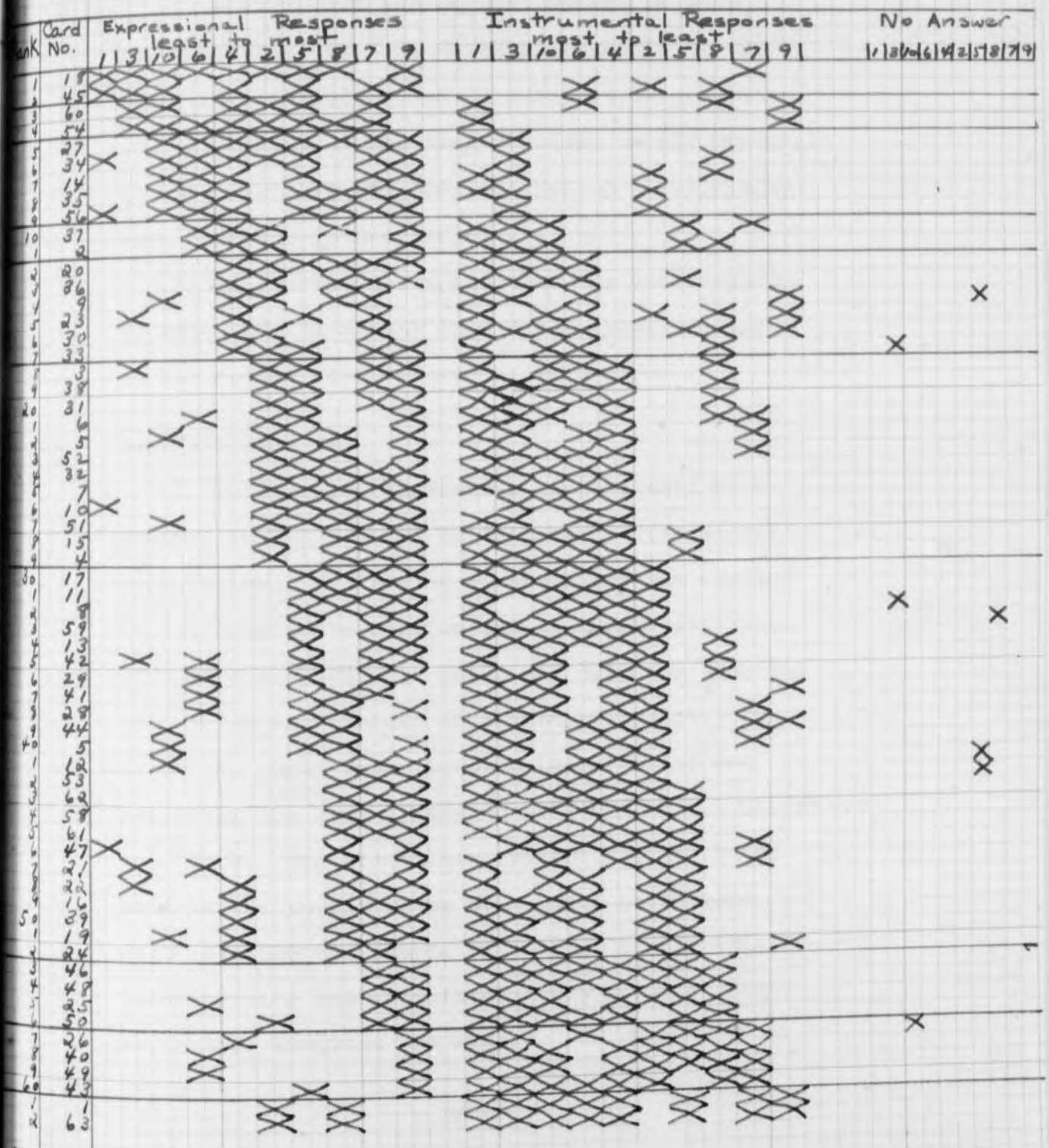
There were not enough items to allow Stouffer's suggested triplets, so it was necessary to have two of the contrived items composed of two questions each. Both original items in the first contrived item (questions 30 and 25) had to have

favorable 'self' responses for the contrived item to be considered positive. The positiveness or negativeness of the triplets was determined by the majority response. A favorable response on either of the original items in the last contrived item (questions 22 and 29) made the new item positive. Since the range for questions 22 and 29 was only one (1), it is likely that the rank order of these items will vary from sample to sample, and it is therefore very likely that these responses will fall within the contrived item. Inclusion is therefore made easier. The range for questions 30 and 25 is fifteen (15), the largest present. It is very unlikely that the ranks of these items would vary, and so inclusion in the contrived item is made difficult. A coefficient of reproducibility of $\neq .95$ was obtained from this procedure! This reproducibility is obviously a considerable improvement over the original $\neq .83$ and is well within the limit of scalability -- $\neq .90$.

Questionnaire #2

Guttman Scale

Instrumental - Expressional Questions



Error

Ques. No.

1
3
10
6
4
2
5
8
7
9

Coef. of reprod. $= 1 - \frac{90}{(10)(63)} = .86$

assume N.A. fit pattern

$1 - \frac{83}{630} = .87$

Notice that the largest amount of what error there is on this H-technique scale occurs in contrived item #2, which is composed of questions 24, 28, and 31 -- all suspect items on the Guttman scales. This is all the more reason to eliminate them from any future scale.

No provision was made for the measurement of intensity in either this first questionnaire or the second one reviewed by this paper.

QUESTIONNAIRE #2

This questionnaire was administered as a pretest in the area of instrumental-expressional orientation. The scalogram technique was applied to the data and a coefficient of reproducibility of $\neq .86$ was obtained. There was only one question (#8) which had greater than twenty percent (20%) error and which was suspected therefore of not measuring the same dimension measured by the other questions. The errors were randomly distributed so that the requirements of a quasi-scale were met. Because the sample of people on whom this questionnaire was administered was so small (62), no further analysis was made.

QUESTIONNAIRE #3

Questionnaire #3 was first considered in terms of the two separate sets of questions it contained. The first set of twelve was designed as a sample from the area of the self-collectivity orientation. The second set, also of twelve items, was constructed to measure the instrumental-expressional variable. In the designing of both sets of questions we benefited from our experience in scaling the questions in the first and second questionnaires.

All of the questions were constructed by the "fold-over" technique, so that intensity of feeling might be ascertained along with content in a single question.[1] As a part of this technique, four alternatives, from "I would definitely" for the action at one end of the variable through "I would definitely" for the action at the other end of the variable, were

---

1 An intensity scale, which ranks people from strong to weak on a single intensity continuum is usually obtained by following each content question with a straightforward question asking how strongly the subject feels. Alternatives from a "very strongly" to a "not at all strongly" are offered. It is also possible to ascertain intensity of feeling along with content in a single question. This is accomplished by what is known as the "fold-over" technique.

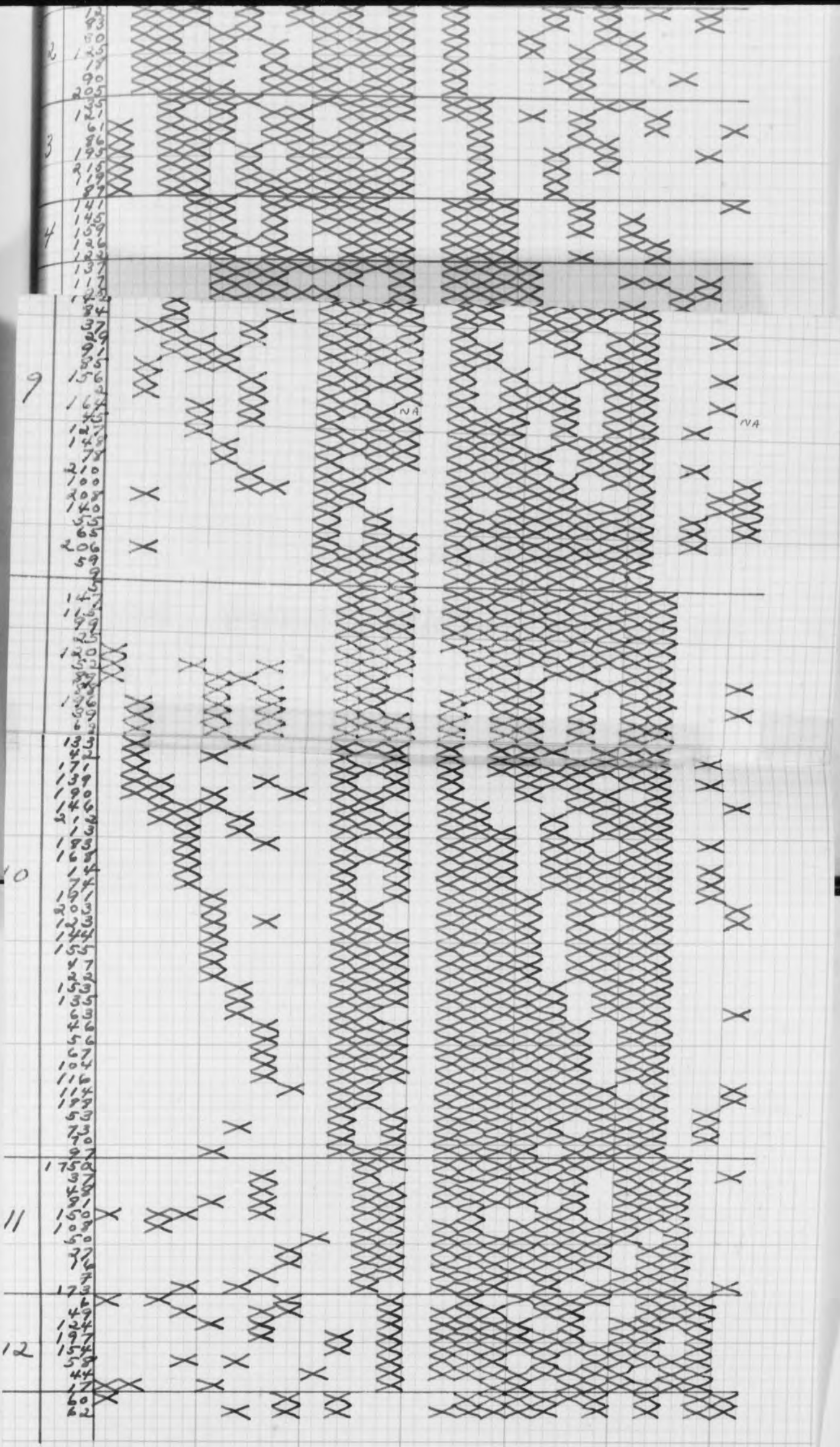
offered. The intensity of feeling would thus be most strongly expressed in these "I would definitely" categories and would decrease toward the middle of the intensity continuum in the "I would probably" categories.[1] In analyzing responses for content, however, the two categories at either end of the content dimension were combined, so that responses were considered as dichotomous in regard to content. The cutting point between favorable and unfavorable responses to each question was placed arbitrarily in this manner, rather than by manipulation of the categories within an item to establish a cutting point that minimizes error -- a part of the scalogram technique. This decision was based on the belief that our combination of categories is more logical than the one established by the scalogram which could combine the "I would definitely" replies at one end of the dimension

1 See Questionnaire #3 for examples.

Questionnaire #3

Guttman Scale

Self - Collectivity Questions



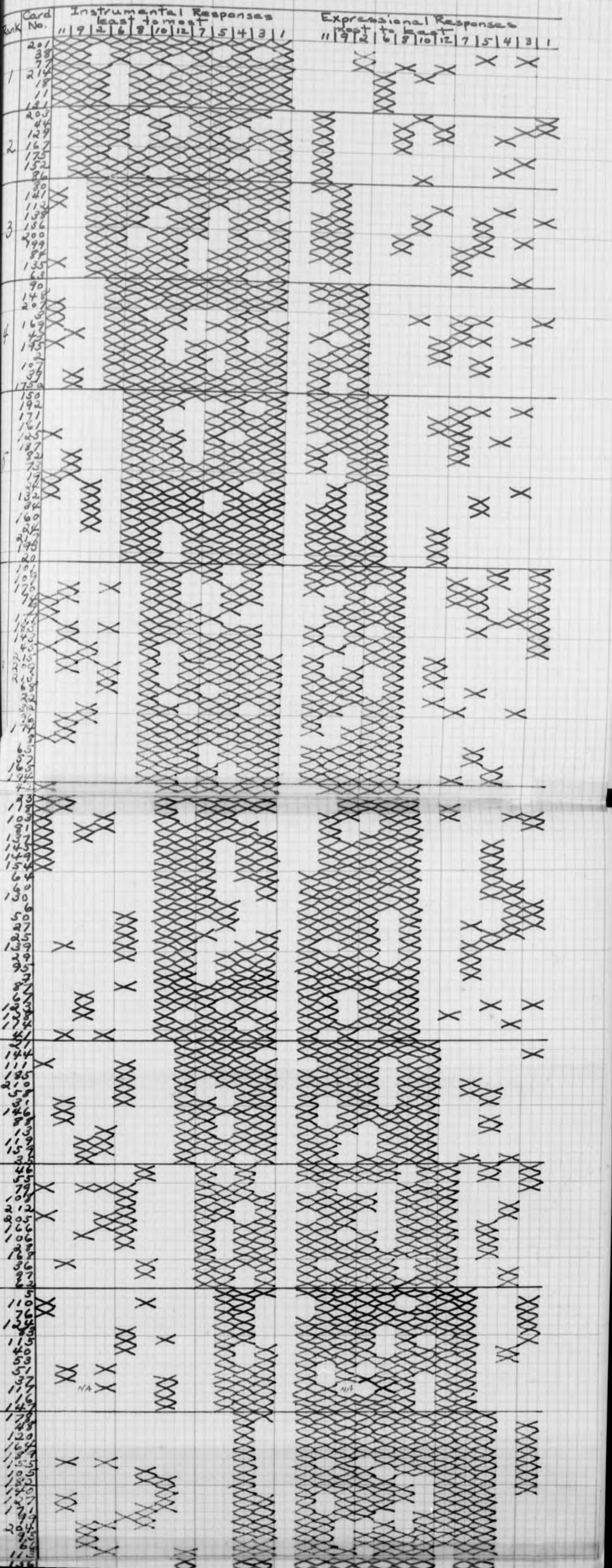
Ques.	Error
8	38
3	33
9	29
5	45
4	43
1	33
12	43
11	45
10	28
2	24
6	26
7	23

Coef. of reprod. $= 1 - \frac{415}{2460} = .83$

Questionnaire #3

Guttman Scale

Instrumental - Expressional Questions



Questionnaire #3

Guttman Scale

Instrumental - Expressional Questions

Rank	Card No.	Instrumental Responses least to most: 11 | 9 | 2 | 6 | 8 | 10 | 12 | 7 | 5 | 4 | 3 | 1	Expressional Responses most to least: 11 | 9 | 2 | 6 | 8 | 10 | 12 | 7 | 5 | 4 | 3 | 1
1	201, 38, 7, 214, 18, 11, 181		
2	203, 44, 129, 167, 175, 152, 86		
3	80, 141, 112, 138, 186, 200, 199, 84, 135, 63		
4	90, 148, 207, 39, 169, 43, 175, 102, 99, 179		
9	105, 212, 205, 166, 106, 88, 168, 36, 97, 62		
10	5, 110, 76, 124, 93, 115, 40, 53, 51, 37, 117, 167, 145	NA	NA
11	178, 48, 120, 164, 185, 155, 105, 182, 140, 147, 171, 99, 204, 96, 61, 111, 156, 91		
12	104, 151, 162, 122, 104, 47, 126, 188, 54, 181, 157, 163, 173, 12, 78		
13	191, 153, 107, 75, 30, 97, 55, 85, 196, 142, 116, 198, 87, 72, 190, 208, 94, 52, 26, 61, 202, 70, 9, 11, 17		

Ques.	Error
11	34
9	33
2	30
6	37
8	40
10	25
12	38
7	38
5	38
4	35
3	26
1	88

$$\text{Coef. of reprod.} = 1 - \frac{412}{2376} = .83$$

with the "I would probably" responses at the other end. Thus the scalogram method would allow the combination of opposite verbal responses within the same category.[1]

The Guttman scalogram was the first technique applied to the two hundred responses to each set of items. Both the self-collectivity and the instrumental-expressional scales yielded a coefficient of reproducibility of $\neq .83$. In neither scale was there greater than twenty percent (20%) error in any one item. Taking into consideration the large number of items (twelve), the distribution of error was random in each. The standards of a quasi-scale were thus met, but it seemed unwise to place much confidence in the distribution of error among the questions by this technique. The reason for this was that, once again, scale types had occurred which, according to the rules of placement, belonged in any of

---

1 The procedure of arbitrary dichotomization of questions has been followed by research workers at the Institute for Research in Social Science at the University of North Carolina. Its applicability in this case was suggested in a conference with Professor Daniel O. Price.

Questionnaire #3

Cornell Technique

Self - Collectivity Questions

Card No	Rank	1 /10	2 /10	3 /10	4 /10	5 /10	6 /10	7 /10	8 /10	9 /10	10 /10	11 /10	12 /10
Error		25	15	23	26	22	19	11	16	15	23	24	33

$\frac{252}{1212}$ = 21% Error

.79 Coef. of reprod.

Questionnaire #3

Cornell Technique

Instrumental - Expressional Questions

Card No	Rank	1	2	3	4	5	6	7	8	9	10	11	12
		10	10	10	10	10	10	10	10	10	10	10	10
Error		20	23	21	25	24	26	25	33	20	29	20	30

$\frac{296}{1224}$ = 24% Error

.76 Coef. of reprod.

several rank groups. Assignment to any one rank group would result in a different placement of error than that which would have resulted from a position in any other of the possible ranks.

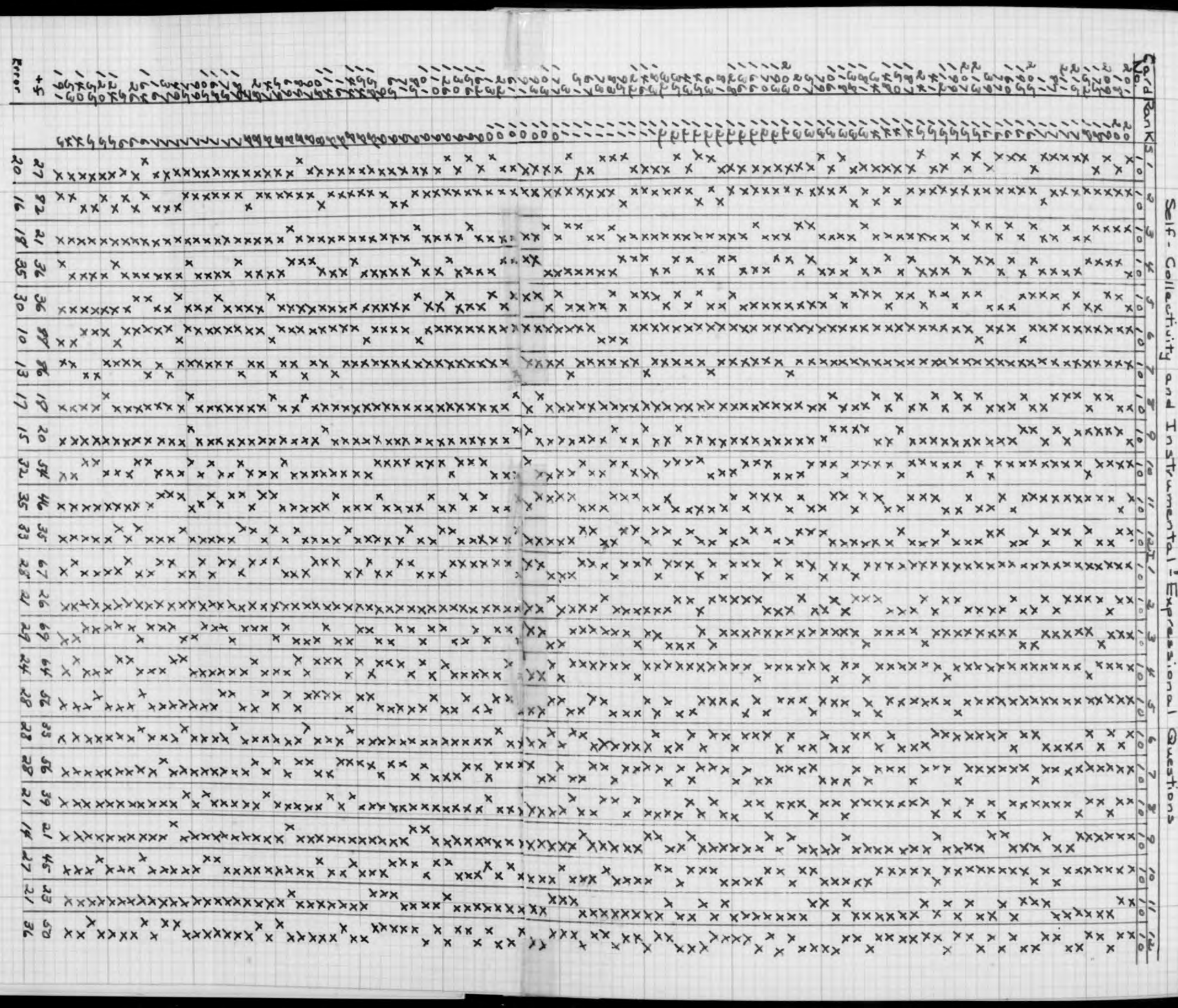
In order to obtain a more definite idea of what items the error actually occurred in, the Cornell technique was applied to the two sets of responses of a sample group of one hundred. The self-collectivity scale yielded a coefficient of reproducibility of .79. Most of these questions would have been eliminated had an examination been made in terms of the standards of the Cornell technique for scalable items --- i.e., less error than non-error in an item category and twenty percent (20%) or less error per item. Fewer of the items on the instrumental-expressional scale would have been lost. The latter scale yielded a coefficient of reproducibility of .76. A good scale should include items that divide the population about evenly on the dimension being measured as well as a few items that elicit almost all favorable or unfavorable responses. Yet these were, on the whole, the very questions ruled out by our application of the Cornell technique.

At this point there were several directions in which we could have proceeded. We could have constructed new scales for each variable from the few questions that had met the criteria set by the techniques which had already been applied. The small number of eligible questions would have meant that the variables would have become very specific. A great possibility of overcapitalization of chance would accompany this scaling step. We might have disregarded also the glaring deviations from the Cornell standards by trying to obtain a scale on each dimension with the H-technique.

Meantime, however, the responses to the two Guttman scales on Questionnaire #3 had been examined and a definite positive relationship between the scales seemed apparent.[1] As a result, we speculated from the analyses of the Cornell technique and of the scalograms and from the observed close relationship between the self-collectivity and the instrumental-expressional

---

1 Since Guttman claims that attitudes on a manifest level are non-continuous variables, that items with a given scale score all fall at one point on the dimension, and that the distance between the rank groups is unknown, a product-moment correlation would not be applicable to our data. Other methods of correlation would also prove inapplicable if one would avoid violation of Guttman's basic assumptions. The method of rank-difference correlation would meet our assumptions, but the resulting rank-difference correlation coefficient would be considerably distorted by the cluster of frequencies in each rank group. The twenty-six cell contingency table that would be necessary to obtain Pearson's mean-square contingency (phi^2), would contain cells with very low frequencies. Rather than attempt to "force" the application of statistical techniques to the data, it was decided that dependence on the observed relationship between the individuals' scores on the two scales would be sufficient.



scales. Although self-collectivity orientation and instrumental-expressional orientation are definitionally different, they seem to have an inherent relationship which makes them appear in conjunction in a concrete situation.[1] Both variables yielded scalogram coefficients of reproducibility of .83. It is possible that we had been too abstract in our definitions, and that actually both sets of items were measuring the same thing on a more concrete level. The apparently close relation between the scales indicated that they were measuring either the same or very closely related variables.

Working from this premise, we combined the items from the two scales. The Cornell technique was applied to these combined items in an attempt to measure the scalability of the new dimension. A coefficient of reproducibility of .76 was obtained, making

[1] See the earlier section in this paper which discusses the pattern variables.

scales. Although self-collectivity orientation and instrumental-expressional orientation are definitionally different, they seem to have an inherent relationship which makes them appear in conjunction in a concrete situation.[1] Both variables yielded scalogram coefficients of reproducibility of ≠.83. It is possible that we had been too abstract in our definitions, and that actually both sets of items were measuring the same thing on a more concrete level. The apparently close relation between the scales indicated that they were measuring either the same or very closely related variables.

Working from this premise, we combined the items from the two scales. The Cornell technique was applied to these combined items in an attempt to measure the scalability of the new dimension. A coefficient of reproducibility of ≠.76 was obtained, making

---

1 See the earlier section in this paper which discusses the pattern variables.

Questionnaire & Cornell Technique

QUESTIONNAIRE #3

STOUFFER'S H-TECHNIQUE
Applied to the Combined
Self-Collectivity -- Instrumental-Expressional Questions

Rank	Card No.	L to M S-I Questions 1234567	M to L C-E Questions 1234567
1	18	XXXXXXX	
1	195	XXXXXXX	
1	215	XX XXXX	X
1	211	XX XXXX	X
1	199	XX X XX	X X
2	201	XXXXXX	X
2	152	XXXXXX	X
2	11	XXXXXX	X
2	63	XXXXXX	X
2	3	XXX XX	X X
2	79	XX XXX	X X
2	112	XX XXX	X X
3	39	XXXXX	XX
3	207	XXXXX	XX
3	41	XXXXX	XX
3	187	XXXXX	XX
3	148	XXXXX	XX
3	34	XXXXX	XX
3	209	X XXXX	X
3	87	X XXXX	X
3	205	X X XXX	X X
3	213	X X XXX	X X
3	150	X XXXX	X
3	106	X X XXX	X X
3	181	X X X X	X X X
3	122	XX X	XX XX
3	138	X XXX	XX X
3	203	X XXX	XX X
3	166	X XXX	XX X
3	136	X XXX	XX X
3	185	XX XX	XX X
3	13	X XXX	XX X
4	20	XXXX	XXX
4	193	XXXX	XXX
4	32	XXXX	XXX
4	95	XXX	XXX X
4	175	X XXXX	XX
4	160	X XXXX	X X
4	77	X XXXX	X X
4	24	X XXXX	X X
4	118	X X XX	X X X
4	170	X XX	XXX X
4	128	X XX	XXX X
4	177	XX X	XXX X
4	130	XX X	XXX X
4	101	XX X	XXX X
4	71	X XX	XXX X
4	65	XXXX	XXX
4	9	XX X	XXX X
4	114	XXXX	XXX
4	16	X XX	XXX X
5	57	XXX	XXXX
5	81	X XXX	X XX
5	45	X XXX	X XX
5	35	X XXX	X XX
5	146	XXX	XXXX
5	67	XXX	XXXX
5	91	XXX	XXXX
5	22	XXX	XXXX
5	156	XXX	XXXX
5	85	X X	XXXX X
5	154	XXX	XXXX
5	144	XXX	XXXX
5	89	X X	XXX X
5	59	X X	XXXX X
6	43	X XX	XX XX
6	51	XX	XXXXX
6	93	XX	XXXXX
6	110	XX	XXXXX
6	108	XX	XXXXX
6	97	XX	XXXXX
6	28	XX	XXXXX
6	7	XX	XXXXX
6	168	XX	XXXXX
6	99	XX	XXXXX
6	57	X	XXXXX X
6	5	XX	XXXXX
6	124	X	XXXXX X
6	53	XX	XXXXX
6	83	X X XX	X XX
7	103	X X	XXX XX
7	61	X X X	XX XX
7	162	X X	XXX XX
7	126	X	XXXXXX
7	158	X X	XXX XX
7	116	X X	XX XXX
7	69	X	XXXXXX
7	189	X	XXXXXX
7	123	X	XXXXXX
7	105	X X	XXX XX
7	75	X X	XXXXX
7	120	X	XXXXXX
7	191	X	XXXXXX
8	47	X	XXX XXX
8	49	X	XX XXXX
8	26	X	XX XXXX
8	55	X	XXXX XX
8	140		XXXXXXX

Contrived Item → Original Questions

1 → 3 S-C, 8 S-C, 9 S-C
2 → 1 S-C, 2 I-E, 11 I-E
3 → 6 I-E, 8 I-E, 5 S-C
4 → 10 I-E, 12 I-E, 11 S-C
5 → 5 I-E, 7 I-E, 10 S-C
6 → 1 I-E, 3 I-E, 4 I-E
7 → 2 S-C, 6 S-C, 7 S-C

Frequency: X responses: 1/1/2/3/4/5/6/7 = 72/92

Error: 64

Coefficient of = 1 - 64

1	195	XXXXXX	
1	215	XX XXXX X	
1	211	XX XXXX X	
1	199	XX X XX X X	
2	201	XXXXXX X	
2	152	XXXXXX X	
2	11	XXXXXX X	
2	63	XXXXXX X	
2	3	XXX XX X X	
2	79	XX XXX X X	
2	112	XX XXX X X	
3	39	XXXXX XX	
3	207	XXXXX XX	
3	41	XXXXX XX	
3	187	XXXXX XX	
3	148	XXXXX XX	
3	34	XXXXX XX	
3	209	X XXXXX X	
3	87	X XXXXX X	
3	205	X X XXX X X	
3	213	X X XXX X X	
3	150	X XXXXX X	
3	106	X X XXX X X	
3	181	X X X X X X X	
3	122	XX X XX XX	
3	138	X XXX XX X	
3	203	X XXX XX X	
3	166	X XXX XX X	
3	136	X XXX XX X	
3	185	XX XX XX X	
3	13	X XXX XX X	
4	20	XXXX XXX	
4	193	XXXX XXX	
4	32	XXXX XXX	
4	95	XXX XXX X	
4	175	X XXXX XX	
4	160	X XXXX X X	
4	77	X XXXX X X	
4	24	X XXXX X X	
4	118	X X XX X X X	
4	170	X XX XXX X	
4	128	X XX XXX X	
4	177	XX X XXX X	
4	130	XX X XXX X	
4	101	XX X XXX X	
4	71	X XX XXX X	
4	65	XXXX XXX	
4	9	XX X XXX X	
4	114	XXXX XXX	
4	16	X XX XXX X	
5	57	XXX XXXX	
5	81	X XXX X XX	
5	45	X XXX X XX	
5	35	X XXX X XX	
5	146	XXX XXXX	
5	67	XXX XXXX	
5	91	XXX XXXX	
5	22	XXX XXXX	
5	156	XXX XXXX	
5	85	X X XXXX X	
5	154	XXX XXXX	
5	144	XXX XXXX	
5	89	X X XXX X	
5	59	X X XXXX X	
6	43	X XX XX XX	
6	51	XX XXXXX	
6	93	XX XXXXX	
6	110	XX XXXXX	
6	108	XX XXXXX	
6	97	XX XXXXX	
6	28	XX XXXXX	
6	7	XX XXXXX	
6	168	XX XXXXX	
6	99	XX XXXXX	
6	57	X XXXXX X	
6	5	XX XXXXX	
6	124	X XXXXX X	
6	53	XX XXXXX	
6	83	X X XX X XX	
7	103	X X X XX XX	
7	61	X X XXX XX	
7	162	X XXXXXX	
7	126	X X XXX XX	
7	158	X X XX XXX	
7	116	X XXXXXX	
7	69	X XXXXXX	
7	189	X XXXXXX	
7	123	X X XXX XX	
7	105	X X XXXXX	
7	75	X XXXXXX	
7	120	X XXXXXX	
7	191	X XXX XXX	
8	47	X XX XXXX	
8	49	X XX XXXX	
8	26	X XXXX XX	
8	55	XXXXXXX	
8	140		

1 { 7 S-C, 8 S-C, 9 S-C

2 { 1 S-C, 2 I-E, 11 I-E

3 { 6 I-E, 8 I-E, 5 S-C

4 { 10 I-E, 12 I-E, 11 S-C

5 { 5 I-E, 7 I-E, 10 S-O

6 { 1 I-E, 3 I-E, 4 I-E

7 { 2 S-C, 6 S-C, 7 S-C

Frequency : × responses: 1 2 3 4 5 6 7 / 2 3 5 6 7 8 9 / 2 5 6 7 8 9 / 2 3 5 6 7 8 9 / 1 2 3 4 5 6 7 / 3 5 6 7 8 9 / 1 2 3 5 6 7 8 9 / 2 3 5 6 7 8 9 / 1 2 3 4 5 6 7 / 1 2 3 4 5 6 7 / 1 2 3 4 5 6 7

this new variable very close to the twenty percent error areas for which Stouffer's H-technique was designed. The H-technique was applied and yielded a coefficient of reproducibility of /.91. Once again application of the H-technique resulted in considerable improvement in reproducibility, although in this case one would be more cautious about assuming the presence of a scalable area since there seems to be some consistency in the pattern of error.

In order to apply intensity analysis, an area must prove scalable for content (the coefficient of reproducibility must be at least /.90), although a scale or a quasi-scale of the intensity component is sufficient. Since both the first set of questions (the self-collectivity scale) and the last set (the instrumental-expressional scale) of Questionnaire #3 yield coefficients of reproducibility of /.83, neither dimension is scalable so that neither meets the first requirement for application of intensity analysis. The scale which combined the two sets of questions yielded a reproducibility coefficient of /.91 with the H-technique, but

the randomness of error was questionable, thereby throwing suspicion on the scalability of the area. With a basic assumption unassured, it seemed unwise to proceed with an intensity analysis.

There seemed to be little difference in the scalability of the orientation areas being studied. The self-collectivity orientation area and the instrumental-expressional area both proved themselves to be unscalable in terms of Guttman's technique, although this technique did produce quasi-scales in both areas. Application of Stouffer's H-technique to the self-collectivity variable did produce a scale -- and one with a quite acceptable coefficient of reproducibility. The observed relation between the scale scores (on each dimension) of a large group suggested a very close relationship between the two orientation areas. The apparently close relation between scales which both yielded the same Guttman coefficients of reproducibility (from the group of two hundred respondents to Questionnaire #3) suggested that the two variables might merge at a less abstract level of definition.

This hypothesis was acted upon when the questions originally designed to measure the separate areas were combined to form a sample of items from the new, more concrete variable. Application of the Guttman and H-technique to the responses in this new area revealed that once again the Guttman technique yielded only a quasi-scale which was improved to the point of becoming a scale upon use of Stouffer's H-technique.

These indications suggest several alternative hypotheses. The similar results and close relationship of the scales measuring the orientation areas may be accounted for by the possibility that the questions are not measuring two separate pattern variables -- the self-collectivity orientation and the instrumental-expressional orientation. The questions designed as samples from these two orientation areas all may actually be measuring a third variable which may not be defined in Parson's scheme at all. In other words, we have no direct check on the external validity of our measuring instruments; indeed, there is

no known external criterion with which they may be validated at present. Of course other hypotheses may also arise from this lack of direct validation. For instance, one scale may be measuring what it is supposed to measure, while the other fails completely, or both may be measuring the orientation area for which just one was designed, etc.

One may hypothesize, on the other hand, that Guttman scales were not obtained simply because "orientations" are not amenable to the basic assumptions of the Guttman scaling technique. Reasoning along this line would lead one to suspect that the improved scales resulting from application of the H-technique are merely the result of over-capitalization on chance or of the less rigorous criteria inherent in the method. Since Stouffer's technique is a relatively new development, it has not as yet been subjected to the test of time and authority. Through many and varied applications of the method, the reasons and their ramifications for the improvement of the Guttman scale may be adequately explained.

Meanwhile, still another hypothesis may be entertained; namely, that the questions one must use to measure orientation areas contain some situational, specific elements that have no particular relation to the underlying variable, but which do interfere with the subject's response to the basic dimension. The underlying variables, on the other hand, are very general and subtle. A possible conclusion is, therefore, that the orientation areas under study seem to be especially amenable to application of the H-technique due to these characteristics. If this is the case, our work then indicates that the H-technique for improving cumulative scales is a promising new approach to scaling in this area.

BIBLIOGRAPHY

Books

Chaddock, R., Principles and Methods of Statistics. New York: McGraw-Hill, 1942.

Guilford, J.P., Fundamental Statistics in Psychology and Education. New York: McGraw-Hill, 1942.

Hagood, M.J. and D.D. Price, Statistics for Sociologists. New York: Henry Holt, revised edition, 1952.

Jahoda, M., M. Deutsch and S. Cook, Research Methods in Social Relations. New York: Dryden Press, vol. 1, 1951.

Jahoda, M., M. Deutsch and S. Cook, Research Methods in Social Relations. New York: Dryden Press, vol. 2, 1951.

Johnson, P.O., Statistical Methods in Research. New York: Prentice Hall, 1949.

Kretch, D. and R. Crutchfield, Theory and Problems of Social Psychology. New York: McGraw-Hill, 1948.

Lindquist, E.F., Statistical Knowledge in Educational Research. Boston: Houghton-Mifflin, 1940.

McCormick, T., Elementary Social Statistics. New York: McGraw-Hill, 1st edition, 1941.

Murphy, G. and R. Likert, Public Opinion and the Individual. New York: Harpers, 1938.

Newcomb, T., Social Psychology. New York: Dryden Press, 1950.

O'Brien, R., C. Schrag and W. Martin, Readings in General Sociology. Boston: Houghton-Mifflin, 1951.

Parsons, T. and E. Shils, Toward a General Theory of Action. Cambridge: Harvard University Press, 1951.

Stouffer, S., L. Guttman, E. Suchman, P. Lazarsfeld, S.Star and J. Clausen, Measurement and Prediction. Princeton: Princeton University Press, vol. 4, 1950.

Thurstone, L.L. and E.J. Chave, The Measurement of Attitudes. Chicago: University of Chicago Press, 1929.

Young, P., Scientific Social Surveys and Research. New York: Prentice-Hall, 2nd edition, 1949.

Articles

Bogardus, E., "A Social Distance Scale." Sociology and Social Research, 1933, 17: 265-271.

Bogardus, E., "Measurement of Social Distance." Journal of Applied Sociology, 1924, 9: 299-308.

Bogardus, E., "Scales in Social Research." Sociology and Social Research, 1939, 24: 69-75.

Carter, H., "Recent American Studies in Attitudes Toward War: A Summary and Evaluation." American Journal of Sociology, 1945, 10: 343-352.

Conrad, H.S., "Some Principles of Attitude Measurement: A Reply to Opinion-Attitude Methodology." Psychological Bulletin, 1946, 43: 570-589.

Cottrell, L.S. Jr., "The Adjustment of the Individual to His Age and Sex Roles." American Sociological Review, 1942, 7: 617-620.

Crespi, L.P., "Opinion-Attitude Methodology and the Polls: A Rejoinder." Psychological Bulletin, 1946, 43: 562-570.

Guttman, L., "A Basis for Scaling Qualitative Data." American Sociological Review, 1944, 9: 139-150.

Guttman, L., "The Cornell Technique for Scale and Intensity Analysis." Educational and Psychological Measurement, 1947, 7: 247-279.

Guttman, L., "On Festinger's Evaluation of Scale Analysis." Psychological Bulletin, 1947, 44: 451-519.

Guttman, L., "The Quantification of a Class of Attributes. A Theory and Method of Scale Construction." in P. Horst, et al., Prediction of Personal Adjustment, The Social Science Research Council Bulletin, 1941, 48: 319-348.

Guttman, L., "Suggestions for Further Research in Scale and Intensity Analysis of Attitudes and Opinions." International Journal of Opinion and Attitude Research, 1947, 1: 30-35.

Guttman, L. and E.A. Suchman, "Intensity and a Zero Point for Attitude Analysis." American Sociological Review, 1947, 12: 57-67.

Hinckley, E.D., "The Influence of Individual Opinion on the Construction of Attitude Scales." Journal of Social Psychology, 1932, 3: 283-296.

Kirkpatrick, C., "The Construction of a Belief Pattern Scale for Measuring Attitudes Toward Feminism." Journal of Social Psychology, 1936, 7: 421.

Kirkpatrick, C., "A Methodological Analysis of Feminism in Relation to Marital Adjustment." American Sociological Review, 1939, 4: 325-334.

Kirkpatrick, C., "A Critical Note on the Statistical Study of Personal Relationships." Journal of Abnormal and Social Psychology, 1939, 4: 325-335.

Day, D., "Methods in Attitude Research." American Sociological Review, 1940, 5: 395-410.

Edwards, A., "A Critique of 'Neutral Items' in Attitude Scales Constructed by the Method of Equal-Appearing Intervals." Psychological Review, 1940, 53: 159-169.

Edwards, A., "On Guttman's Scale Analysis." Educational and Psychological Measurements, 1948, 8: 313-318.

Edwards, A. and K. Kenny, "A Comparison of Thurstone and Likert Techniques of Attitude Scale Construction." Journal of Applied Psychology, 1946, 30: 72-83.

Edwards, A. and L. Kilpatrick, "A Technique for Construction of Attitude Scales." Journal of Applied Psychology, 1948, 32: 374-384.

Federighi, E., "The Use of X^2 in Small Samples." American Sociological Review, 1950, 15: 777-779.

Ferguson, L.W., "The Influence of Individual Attitudes on the Construction of an Attitude Scale." Journal of Social Psychology, 1935, 6: 115-117.

Ferguson, L.W., "The Requirements of an Adequate Attitude Scale." Psychological Bulletin, 1939, 36: 665-673.

Ferguson, L.W., "A Study of the Likert Technique and Attitude Construction." Journal of Social Psychology, 1931, 13: 51-57.

Festinger, L., "The Treatment of Qualitative Items by Scale Analysis." Psychological Bulletin, 1947, 44: 149-161.

Furfey, P. and J. Daly, "A Criticism of Factor Analysis As a Technique of Social Research." American Sociological Review, 1937, 2: 178-186.

Komarovsky, M., "Cultural Contradictions and Sex Roles." American Journal of Sociology, 1946, 52: 184-189.

Likert, R., "A Technique for Measuring Attitudes." Archives of Psychology, 1932, 22: 1-55.

McCormick, T., "Note of Validity of Mathematical Problems in Social Research." American Sociological Review, 1945, 10: 626-631.

McNemar, Q., "Opinion and Attitude Methodology." Psychological Bulletin, 1946, 43: 289-369.

Motz, A.B., "The Role Conception Inventory: A Tool for Research in Social Psychology." American Sociological Review, 1952, 17: 465-471.

Schuessler, K.F., "Item Selection in Scale Analysis." American Sociological Review, 1952, 17: 183-192.

Smith, M., "An Empirical Study of Prestige Status of Occupations." American Sociological Review, 1943, 8: 185-192.

Stouffer, S., E. Borgatta, D. Hays and A. Henry, "A Technique for Improving Cumulative Scales." The Public Opinion Quarterly, 1952, 16: 273-291.

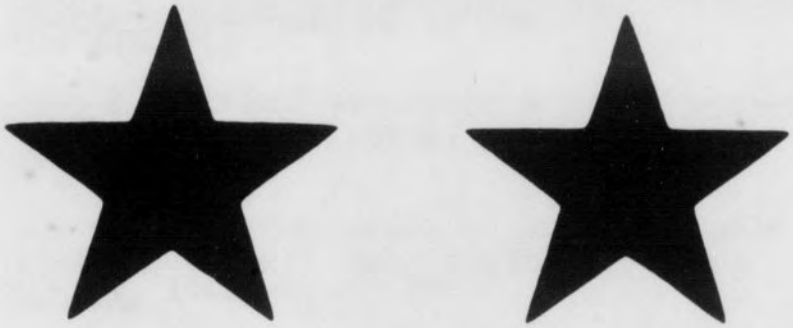
Taves, M.J., "Analysis of Covariance in Social Science Research." American Sociological Review, 1950, 15: 373-381.

Thurstone, L.L., "Attitudes Can Be Measured." American Journal of Sociology, 1928, 33: 529-554.

Thurstone, L.L., "The Construction of an Attitude Scale." American Journal of Sociology, 1928, 33: 544-547.

Thurstone, L.L., "The Theory of Attitude Measurement." Psychological Review, 1929, 36: 222-241.

CORRECTION



PRECEDING IMAGE HAS BEEN REFILMED TO ASSURE LEGIBILITY OR TO CORRECT A POSSIBLE ERROR

Komarovsky, M., "Cultural Contradictions and Sex Roles." American Journal of Sociology, 1946, 52: 184-189.

Likert, R., "A Technique for Measuring Attitudes." Archives of Psychology, 1932, 22: 1-55.

McCormick, T., "Note of Validity of Mathematical Problems in Social Research." American Sociological Review, 1945, 10: 626-631.

McNemar, Q., "Opinion and Attitude Methodology." Psychological Bulletin, 1946, 43: 289-369.

Motz, A.B., "The Role Conception Inventory: A Tool for Research in Social Psychology." American Sociological Review, 1952, 17: 465-471.

Schuessler, K.F., "Item Selection in Scale Analysis." American Sociological Review, 1952, 17: 183-192.

Smith, M., "An Empirical Study of Prestige Status of Occupations." American Sociological Review, 1943, 8: 185-192.

Stouffer, S., E. Borgatta, D. Hays and A. Henry, "A Technique for Improving Cumulative Scales." The Public Opinion Quarterly, 1952, 16: 273-291.

Taves, M.J., "Analysis of Covariance in Social Science Research." American Sociological Review, 1950, 15: 373-381.

Thurstone, L.L., "Attitudes Can Be Measured." American Journal of Sociology, 1928, 33: 529-554.

Thurstone, L.L., "The Construction of an Attitude Scale." American Journal of Sociology, 1928, 33: 544-547.

Thurstone, L.L., "The Theory of Attitude Measurement." Psychological Review, 1929, 36: 222-241.

Wallin, P., "Cultural Contradictions and Sex Role." American Sociological Review, 1950, 15: 288-293.

Wang, C., "Suggested Criteria for Writing Attitude Statements." Journal of Social Psychology, 1933, 3: 367-373.

Winch, R., "Hueristic and Empirical Typologies." American Sociological Review, 1947, 13: 68-75.

Wallin, P., "Cultural Contradictions and Sex Role." American Sociological Review, 1950, 15: 288-293.

Wang, C., "Suggested Criteria for Writing Attitude Statements." Journal of Social Psychology, 1933, 3: 367-373.

Winch, R., "Hueristic and Empirical Typologies." American Sociological Review, 1947, 13: 68-75.

APPENDIX

1st questionnaire

Interviewer's name Desharzo

Case number 54 ✓

OCCUPATIONAL QUESTIONNAIRE

Background data

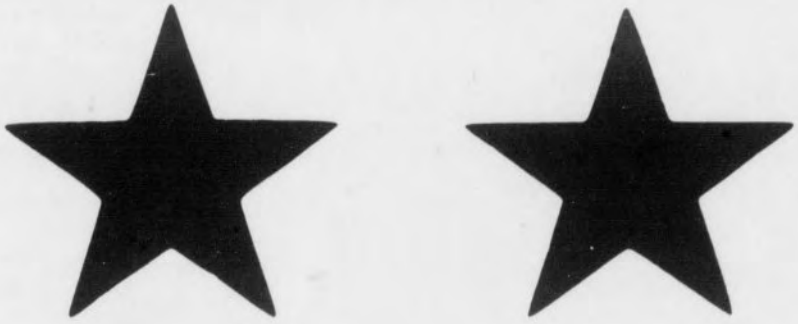
1- Home address:
Town, or if rural, county Stokes Co. N.C.
State N.C.
Country
2- How long have you lived there? 22 years
3- Where have you lived the most part of your life?
Town, or if rural, county Stokes Co.
State N.C.
4- Where were you born?
State Stokes N.C.
Country
5- Age at nearest birthday 22 yrs.
6- Marital status: Married , Single ✓, Engaged
7- Religion: Catholic Protestant ✓ Jewish (Baptist)
8- Major at WC: B.S.D.A. (business) teaching
9- Have you ever had a summer job outside of your home? yes ✓, no
10 If yes, what kind of job(s)

Description of job	Location of job
worked in tax office (office work)	Danbury, N.C.
4 summers " " State park, worked in both	Lause Park near Danbury

11 Is your father:
Living ✓ Where(town or county, state) Stokes Co.
Dead When (Year)
Divorced (from your mother) When? (year)
12 In what year was your father born? 1885
13 Where did he grow up? State N.C. Country
14 Is your mother:
Living ✓ Where?(town or county, state) Stokes Co.
Dead When?(year)
15 In what year was your mother born? 1903
16 Where did she grow up? State Virginia Country
17 Do you have a step father or a step mother?
Father When did he marry your mother?
Mother When did she marry your father?
18 List brothers who are older than you beginning with the oldest (if step put "S" after age)(write on back of sheet if necessary)

(S) age 34	education College & Veterans School	occ. farmer	married ✓	loc Stokes.

CORRECTION



PRECEDING IMAGE HAS BEEN REFILMED TO ASSURE LEGIBILITY OR TO CORRECT A POSSIBLE ERROR

1st questionnaire ✓

Interviewer's name Desbrow Case number 54 ✓

OCCUPATIONAL QUESTIONNAIRE

Background data

1- Home address:
Town, or if rural, county Stokes Co. N. C.
State N. C.
Country
2- How long have you lived there? 22 years
3- Where have you lived the most part of your life?
Town, or if rural, county Stokes Co.
State N. C.
4- Where were you born?
State Stokes N. C.
Country
5- Age at nearest birthday 22 yrs.
6- Marital status: Married ____, Single ✓, Engaged ____
7- Religion: Catholic ____ Protestant ✓ Jewish ____ (Baptist)
8- Major at WC: B. S. D. A. (business) teaching
9- Have you ever had a summer job outside of your home? yes ✓, no ____
10 If yes, what kind of job(s)

Description of job	Location of job
worked in tax office (typing work)	Danbury, N.C.
" " state park, worked in both	Lewis Park near Danbury

11 Is your father:
Living ✓ Where (town or county, state) Stokes Co.
Dead ____ When (Year) ____
Divorced (from your mother) ____ When? (year) ____
12 In what year was your father born? 1885
13 Where did he grow up? State N. C. Country
14 Is your mother:
Living ✓ Where? (town or county, state) Stokes Co.
Dead ____ When? (year) ____
15 In what year was your mother born? 1903
16 Where did she grow up? State Virginia Country
17 Do you have a step father or a step mother?
Father ____ When did he marry your mother?
Mother ____ When did she marry your father?
18 List brothers who are older than you beginning with the oldest (if step put "S" after age) (write on back of sheet if necessary)

	age	education	occ.	married	loc
(S)	34	10th gr. & Veterans School	farmer	✓	Stokes.

19 List sisters who are older than you beginning with the oldest

	age	ed.	occ.	married	loc.
(S)	32	11th grade.	Don't know what? Western Electric	✓	Stokes Co.
(S)	30	high school grad.	housewife	✓	Norfolk, Va.

20 List brothers who are younger than you beginning with the oldest

	age	ed.	occ.	married	loc.
	18	11th grade	Air Force		I was.

21 List sisters who are younger than you beginning with the oldest

	age	ed.	occ.	married	loc.

Value conflict questions

Now I am going to describe to you some real life situations in which a choice must be made between two alternatives. There is no right or wrong answer. Some people will choose one alternative, others will choose the other. I would also like for you to use your best judgment in telling me what your mother would advise in such a situation and what your father would advise in such a situation. (Indicate whether answers are in terms of real parent or step parent)

22- Claire is a 16 year old high school girl from a family that is pretty well fixed financially. Although she receives an allowance, she wants to earn some extra money during the summer. Both of her parents see this as an opportunity for teaching Claire to assume more responsibility but they disagree on the area in which she needs to develop this trait. One parent feels that Claire should take on more of the management of the household (planning meals, cooking, shopping, cleaning up, etc.) and be paid for it, giving as the reason that after all she would need to know these things when she was older and married. Her other parent thinks she should get a job outside the home so she can learn how to take care of herself in any situation.

Interviewer's name Dudley, M. Case number 54

1- Which of these views do you agree with?
I ____ Responsibility in the home
✓ Responsibility outside the home

2- Which view would your mother emphasize if she were advising Claire
C ✓ Responsibility in the home
____ Responsibility outside the home

3- Which would your father emphasize if he were advising Claire?
____ Responsibility in the home
I ✓ Responsibility outside the home

23- Jean had had a lonely life and had made few friends. After graduating from college she went right on to get her M.A. degree and got a job teaching high school in a small town. There she met two girls her own age who were also teachers. The three became good friends, lived together, and went around with the same crowd of boys. At the end of a year Jean was offered a much better paying and more promising job at another school 500 miles away. Jean could not decide whether to take this job and risk being lonely and unhappy in order to advance her career or to stay where she had found real security in friendship.

1- Which would you do if you were Jean?
I ____ Stick with friends
✓ Take better job

2- Which would your mother advise Jean to do?
C ✓ Stick with friends
____ Take better job

3- Which would your father advise Jean to do?
____ Stick with friends
I ✓ Take better job

24- In a certain high school a special committee was appointed by the faculty to revise some of the school rules. This committee voted to establish a series of changes in the rules which two members of the committee thought would be very unfair. They objected in the meetings and tried to show the basis of their objections but the other members could not be convinced. The two members agreed that things could not continue as they were but they made different decisions in regard to what action they should take next...One decided to go along with the committee and stop voicing her objections. She thought that after all one person's judgment could not be relied on that strongly and that she should let the majority opinion rule. The other girl resigned from the committee and wrote an article in the student newspaper telling why she disagreed with the committee's policy on rules. She felt that she could not conscienciously continue to be associated with a group whose stand on an important issue she disagreed with so strongly.

1- Which of these two girls do you most agree with?
I ____ let majority rule
✓ resign from committee

2- Which of these two girls' positions would your mother want you to take?
C ✓ let majority rule
____ resign from committee

3- Which of these two girls' positions would your father want you to take?
____ let majority rule
I ✓ resign from committee

25- Susan was a business major in college. She planned to work as a secretary in an office and hoped to work up to a position as private secretary for a big businessman. Susan was from a small town and although she could get a job at home she knew that the kind of job she really wanted could only be found in a large city. During Susan's senior year, however, it was discovered that her mother had tuberculosis and would have to go to a sanatorium for an indefinite length of time. This left Susan's father to care for her younger brother of 12. Her father was financially able to hire someone to care for the house and her little brother, but Susan felt that both her father and her brother needed her at home. Susan had to decide whether she should give up her ambition to become a successful business woman with a really interesting and challenging job in order to help her family, or whether she owed it to herself to go on with her plans since perhaps a good servant would be just as much help as she would be to her father and brother.

1- If you were Susan which would you do?
I ____ stay at home
✓ continue plans

Now pretend that Susan's family lived next door to your family...

2- What would your ~~father~~ say Susan should do? (mother)
C ✓ stay at home
____ continue plans

3- What would your father say Susan should do?
I ____ stay at home
✓ continue plans

Interviewer's name Dudley, M. Case number 54

26- Mary is majoring in Chemistry and is doing excellent work in a lab course. On each test this semester, she has made top grades. In fact, there has been a considerable gap between her grades and the next highest. She has come to feel the resentment of the other girls and is very worried by this situation. She wavers between two alternatives: Should she continue to work at her top capacity despite the dislike of the other girls because she believes that a person should do her work to the best of her ability. Or should she lower her standards to the point of making good grades, but not the best in the class, because it is more important to be liked and accepted by ones classmates than to always work at top capacity.

1- If you were Mary which would you do?
I ✓ do best job
___ lower standards for friends

2- Which would your mother think was more important for a girl like Mary?
C ___ do best job
✓ lower standards for friends

3- Which would your father think was more important for a girl like Mary?
I ✓ do best job
___ lower standards for friends

27- Peggy was from a middle-sized town in North Carolina. She had graduated from college and married a college graduate from another state. It happened that he was offered a job in Peggy's home town and a job in a town of about the same size in a neighboring state. The jobs were equal in all respects and they were in branch offices of the same company. John left the decision as to which job to take up to Peggy. Peggy looked at it this way: In her home town she and her parents are rather well known and liked. There she would see her long time friends frequently and be xxxxxxxxx living near her parents. In the other town, out of the state, they would be starting out completely on their own, leading their own life, and making their own place in the community.

1- If you were Peggy where would you prefer to live?
C ✓ in home town
___ in another town
xx
Now pretend that Peggy's family lived next door to your family

2- Where would your mother think Peggy ought to live?
C ✓ in home town
___ in another town

3- Where would your father think Peggy ought to live?
C ✓ in home town
___ in another town

28- Group A and group B are putting up candidates for President of the Student Body. Group A has put up two candidates for election, but it has become apparent that the vote of the student body will be split between them thus giving group B with only one candidate an advantage. It is also apparent that Jane, one of Group A's candidates has no intention of withdrawing. Joan the other Group A candidate, faces this dilemma: Should she withdraw from the race in order to give her group a better chance of winning the election. Or should she stay in the race and hope to win because she feels she is more qualified for the job than the other candidates?

1- If you were in Joan's position which would you do?
C ✓ withdraw from the race
___ stay in the race

2- What would your mother think a girl like Joan should do in this situation
C ✓ withdraw from the race
___ stay in the race

3- What would your father think a girl like Joan should do in this sit?
C ✓ withdraw from the race
___ stay in therace

29- A group of girls had roomed on the same floor at college and were very close friends. After graduation they all took civil service jobs in the same agency. They went thru their training period together and were then sent to a small out of the way town where there was little to do. The girls made the best of things and enjoyed each other but the town itself was dull. After a while two of the girls had a chance to be transferred--each one to a different large city. The two girls make different decisions. The first girl accepts the transfer even though it means leaving her close college friends because she does not like the town she is in. The second refuses the transfer even though she doesn't like this location because the more exciting experiences in the city would mean little to her if she were not able to share them with her friends.

1- Which of these girls' decisions do you most agree with?
I ✓ accept transfer
___ refuse transfer

2- Which of these girls' decisions would your mother think was best?
C ___ accept transfer
✓ refuse transfer

3- Which of these girls' decisions would your father think was best?
I ✓ accept transfer
___ refuse transfer

Interviewer's name Dethazy, M. Case number 54

30- Betty's parents had been able to pay for all her college expenses. Now, after graduation, Betty was planning to work and save every penny toward putting herslef through graduate school. Betty's younger sister, Jane, was going to enter college in the fall, but the family had suffered a serious financial setback and could only pay Jane's tuition and nothing else. Betty is faced with this problem as she sees it: Since she did not have to work while at college, she should put off her plans for graduate school indefinitely and send her extra money to help pay Jane's expenses above tuition...or since Jane can work and earn the rest of her expenses, Betty should not jeopardize her own career, and should go right on saving her money for graduate work.

1- Which of these alternatives would you choose if you were Betty?
C ✓ help sister
___ save for graduate school
2- Which would your mother think Betty should do?
C ✓ help sister
___ save for graduate school
3- Which would your father think Betty should do?
C ✓ help sister
___ save for graduate school

31- Laura is a popular 17 year-old high school girl. She has recently been dating Dick, who is a very sought after boy at school. Her parents, however, dislike her dating this particular boy because they feel he is irresponsible and they do not think that they and Laura would really enjoy having him in their home. Laura asks herslef: Should she stop dating Dick and turn her attention to those boys whom her parents would like and enjoy too, or should she continue dating Dick, believing that what her family thinks doesn't matter since her she alone feels about a boy is what should count?

1- If you were Laura which would you do?
C ✓ stop dating Dick
___ continue to date Dick
2- What would your mother say Laura should do?
C ✓ stop dating Dick
___ continue to date Dick
3- What would your father say Laura Should do?
C ✓ stop dating Dick
___ continue to date Dick

OCCUPATIONAL CHOICE

32- What do you plan to be doing next year at this time?
___ graduate school
✓ job
___ marriage

33- If all conditions were ideal, what would you consider the perfect occupation?

doctor-

34- That then, is your fantasy job. Now what job do you realistically hope for? (Write up on separate sheet and attach. Be sure you cover the following factors: technical content, location, responsibility for people, responsibility for job, independence, personal contact, prestige of job)

35- Outside of the fact that the work is interesting to you, which of the following things do you feel are the most important to consider in choosing a job? Which does your mother think you should consider first? Your father

(Rank in order of importance)	Girl	MOther	Father
1 chances for advancement	1	2	1
2 the pay	3	3	3
3 the people you would be working with	2	1	2

36- Suppose you were married and had no children. You and your husband agree that his income is quite adequate to support you and even to put some money aside. Under these circumstances what would your attitude be toward working outside of the home.

1- Would prefer not to work outside and devote your time to your husband and home.
2- Would prefer not to work outside the home and devote your time to making friends and doing community club work.
3- Would prefer to have a full-time job outside of the home in order to feel that you are doing something on your own.
4- Would prefer a part-time job which although not as interesting as a full time job would xxx give you something to do.

Which would your mother think was best?
Which would your father think was best?

(Write in number) Girl 4 Mother 1 Father 3

Interviewer's name Duthays, Th. Case number 5-F

FINAL BACKGROUND QUESTIONS

37- What grade in school did your mother complete?
___ Attended grammar school
✓ Attended high school
___ Finished high school
___ Attended college
___ Finished college
___ Graduate or professional school

38- Has your mother employed at a paying job outside of the home before she married
___ Yes
✓ No

39- If yes, what kind of work did she do? _____

40- Has your mother had a full-time paying job outside the home for at least two years at any time in the last ten years?
___ Yes, for _____ years
✓ No

41- If yes, what kind of job was it? (full description)

42- Has your mother had a part-time paying job outside of the home for at least 2 years at any time in the last ten years?
___ Yes, for _____ years
✓ No

43- If yes, what kind of job was it? (full description)

44- To what community organizations does your mother belong? (mention social, political, religious, business or professional, community service, etc. as alternatives)

Home Demonstration _____ _____
P.T.A. when children in school _____ _____

45- In her club activities would you say she is:
___ extremely active
___ active
___ only slightly active
✓ inactive

1- What grade in school did your father complete? (check only one)
___ Attended grammar school
___ Attended high school
✓ Finished high school attended boarding school after h.s. grad., 1 yr.
___ Attended college
___ Finished college
___ Graduate or professional school

2- What is your father's occupation? (get previous occ. if retired) EXACTLY
Superintendent of Stokes Co. Home - (for aged) (home supported by county)

FAMILY INFLUENCES

48- Which of your parents do you feel understands you the best?
___ Mother
✓ Father

49- Which of your parents' advice do you usually take?
___ Mother
✓ Father

50- Which family member speaks most of your having a career after college?
66 Father

51- Which family member speaks most of your getting married and having a home after college? Neither Mother

52- Which parent speaks most of your having a career?
___ Mother
___ Father

53- Which parent speaks most of your getting married and having a home?
___ Mother
___ Father

54- Which brother or sister speaks most of your having a career?
___ Sister (put age)
✓ Brother (put age) 18

55- Which brother or sister speaks most of your getting married and having a home?
✓ Sister (put age) 32
___ Brother (put age)

Questionnaire #2

Question one

Suppose that two events were scheduled for the same night at a college. One was a ballet and the other was a lecture entitled "Morals for Moderns". Suppose too that the dancers and the lecturer are both outstanding and that neither the dance program nor the lecture will be repeated

WHICH OF THESE TWO EVENTS WOULD YOU ATTEND?

___I would definitely attend the ballet.
___I would probably attend the ballet.
___I would probably attend the lecture on "Morals for Moderns".
___I would definitely attend the lecture on "Morals for Moderns".

Now suppose that at the last minute still another event was scheduled for that same night. It was a lecture by one of the most outstanding people in your chosen occupation which you knew would be of help to you both in your course work and your future occupational plans.

IF YOU HAD TO CHOOSE BETWEEN GOING TO THE BALLET AND THE LECTURE BY AN OUTSTANDING PERSON IN YOUR FIELD, WHICH WOULD YOU ATTEND?

___I would definitely attend the ballet.
___I would probably attend the ballet.
___I would probably attend the lecture by an outstanding person in my chosen occupation.
___I would definitely attend the lecture by an outstanding person in my chosen occupation.

IF YOU HAD TO CHOOSE BETWEEN GOING TO THE LECTURE ON "MORALS FOR MODERNS" AND THE LECTURE BY AN OUTSTANDING PERSON IN YOUR FIELD, WHICH WOULD YOU ATTEND?

___I would definitely attend the lecture on "Morals for Moderns".
___I would probably attend the lecture on "Morals for Moderns".
___I would probably attend the lecture by an outstanding person in my chosen occupation.
___I would definitely attend the lecture by an outstanding person in my chosen occupation.

Question two

Two college girls were discussing their reasons for attending a "get-together" to which majors in their department had been invited by the majors in the same department in a near by girls school.

One girl said she was going because she liked to meet and mix with people. She enjoyed talking to them and she just liked social occasions.

The other girl said she was going in order to meet others in her field. She wanted to talk "shop" with them and find out how their department differed from her own and perhaps learn something more about job opportunities in her field.

IF YOU WERE GOING TO ATTEND THIS GET-TOGETHER WHICH GIRL'S REASONS FOR GOING WOULD BE MOST LIKE YOUR OWN?

___I would definitely be more like the 1st girl who was going because she liked being sociable.
___I would probably be more like the 1st girl who was going because she liked being sociable.
___I would probably be more like the 2nd girl who was going because she wanted to talk "shop".
___I would definitely be more like the 2nd girl who was going because she wanted to talk "shop".

A third girl entered the discussion and said that she was going ~~xx~~ to the "get-together" because she thought she ought to be sociable. Althought she had really rather not go she thought she should get out and mix with people, especially with those in her own field.

IF YOU HAD TO CHOOSE BETWEEN THE REASONS OF THE 1st GIRL AND THE 3rd GIRL, WHICH GIRL'S REASONS FOR GOING WOULD BE MOST LIKE YOUR OWN?

___I would definitely be more like the 1st girl who was going because she liked being sociable.
___I would probably be more like the 1st girl who was going because she liked being sociable.
___I would probably be more like the 3rd girl who was going because although she had really rather not go, she thought she ought to be sociable.
___I would definitely be more like the 3rd girl who was going because slthough she had really rather not go, she thought she ought to be sociable.

IF YOU HAD TO CHOOSE BETWEEN THE REASONS OF THE 2nd GIRL AND THE XXXXXXX 3rd GIRL, WHICH GIRL'S REASONS FOR GOING WOULD BE MOST LIKE YOUR OWN?

___I would definitely be more like the 2nd girl who was going because she wanted to talk "shop".
___I would probably be more like the 2nd girl who was going because she wanted to talk "shop".
___I would probably be more like the 3rd girl who was going because although she had really rather not go, she thought she ought to be sociable.
___I would definitely be more like the 3rd girl who was going because although she had really rather not go, she thought she ought to be sociable.

Question three

With finals over and graduation day ahead, two seniors were looking back on their college life and began talking about why they were glad they had been to college. Mary said she was glad she had been because a college degree and the training back of it are essential for getting a good-paying and interesting job.

The other girl, Jane, said that although a college education might prove useful to her too, looking back on it she was glad she had been to college mainly because she had had such a wonderful time. She said she wouldn't take anything for the just plain fun she had had in school.

IF YOU WERE LOOKING BACK ON YOUR COLLEGE EXPERIENCE WHICH XXXXXXX GIRL'S IDEAS WOULD BE MOST LIKE YOUR OWN?

___I would definitely be more like the 1st girl, Mary, who was glad she had been to college because college training was essential for getting a good job.
___I would probably be more like the 1st girl, Mary, who was glad she had been to college because college training was essential for getting a good job.
___I would probably be more like the 2nd girl, Jane, who was glad she had been to college because she had had such a wonderful time.
___I would definitely be more like the 2nd girl, Jane, who was glad she had been to college because she had had such a wonderful time.

A third girl, Joan, said that she had a still different reason. She said she was glad she had been to college because it had broadened her in so many ways. She felt it had been one of the richest experiences in her life and had made her grow as a person.

IF YOU HAD TO CHOOSE BETWEEN THE IDEAS OF THE 1st GIRL AND THE 3rd GIRL WHICH WOULD BE MOST LIKE YOUR OWN?

___I would definitely be more like the 1st girl, Mary, who was glad she had been to college because college traininggwas essential for getting a good job.
___I would probably be more like the 1st girl, Mary, who was glad she had been to college because college training was essential for getting a good job.
___I would probably be more like the 3rd girl, Joan, who was glad she had been to college because the experience had broadened her and made her grow as a person.
___I would definitely be more like the 3rd girl, Joan ....

IF YOU HAD TO CHOOSE BETWEEN THE IDEAS OF THE 2nd GIRL AND THE 3rd GIRL WHICH WOULD BE MOST LIKE YOUR OWN?

___I would definitely be more like the 2nd girl, Jane, who was glad she had been to college because she had had such a wonderful time.
___I would probably be more like the 2nd girl, Jane.
___I would probably be more like the 3rd girl, Joan, who was glad she had been to college because ~~it~~ the experience had broadened her and made her grow as a person.
___I would definitely be more like the 3rd girl, Joan.

Question four

Two college girls are planning to be grammar school teachers but they want to teach for somewhat different reasons. Now you may or may not plan to teach but imagine for a moment that you do.

One girl said: "I want to teach grammar school because young children's personalities can be molded and shaped for better or worse and I want by example and guidance to help them become strong, well adjusted people".

Another girl said: "I want to guide children too, but I want to teach mainly because I love little children and they love their teachers. It is so wonderfully satisfying the way young children respond to you and appreciate every little thing you do."

IF YOU PLANNEDTO TEACH IN GRAMMAR SCHOOL WHICH GIRL'S REASONS WOULD BE MOST LIKE YOUR OWN?

___I would definitely be more like the 1st girl who wanted to mold the personalities of young children.
___I would probably be more like the 1st girl who wanted to mold the personalities of young children.
___I would probably be more like the 2nd girl who loved children and the way they responded to her.
___I would definitely be more like the 2nd girl who loved children and the way they responded to her.

A third girl who is also planning to teach in grammar school entered the discussion and said: "Education is one of the most necessary and important things in the world today and I want to teach in grammar school because if children don't get a good foundation, a higher education just won't "take" with them."

IF YOU HAD TO CHOOSE BETWEEN THE REASONS OF THE 1st GIRL AND THE 3rd GIRL WHICH WOULD BE MOST LIKE YOUR OWN?

___I would definitely be more like the 1st girl who wanted to mold the personalities of young children.
___I would probably be more like the 1st girl who wanted to mold the personalities of young children.
___I would probably be more like the 3rd girl who wanted to give young children a good foundation so a higher education would "take" with them.
___I would definitely be more like the 3rd girl who wanted to give young children a good foundation so a higher education would "take" with them.

IF YOU HAD TO CHOOSE BETWEEN THE REASONS OF THE 2nd GIRL AND THE 3rd GIRL WHICH WOULD BE MOST LIKE YOUR OWN?

___I would definitely be more like the 2nd girl who loved children and the way they responded to her.
___I would probably be more like the 2nd girl who loved children and the way they responded to her.
___I would probably be more like the 3rd girl who wanted to give young children a good foundation so a higher education would "take" with them.
___I would definitely be more like the 3rd girl who wanted to give young children a good foundation so a higher education would "take"with them.

Question five

Suppose that in the college annual, a little was written under each senior's name describing her main traits or characteristics. Margaret was described in the following way: "She is a girl with high morals and she puts them into daily practice."

Mary, another senior, was described this way: "With her efficiency and resourcefulness she gets things done. She makes honor grades and in going places in her field."

IF YOU ~~XXE~~ WERE BEING WRITTEN UP IN THE ANNUAL WHICH ~~XXXXXX~~ GIRL'S TRAITS HAD YOU RATHER HAVEA ATTRIBUTED TO YOU?

___I would definitely rather be like Margaret whom they said had high morals and put them into daily practice.
___I would probably rather be like Margaret whom they said had high morals and put them into daily practice.
___I would probably rather be like Mary whom they said was efficient and was going places in her field.
___I would definitely rather be like Mary wh om they said was efficient and was going places in her field.

A third girl, Elizabeth was described in a still different way: "She is poised and composed, pleasant to be with and always gracious".

IF YOU HAD TO CHOOSE HAD YOU RATHER HAVE THE TRAITS OF MARGARET OR OF ELIZABETH ATTRIBUTED TO YOU?

___I would definitely rather be like Margaret whom they said had high morals and put them into daily practice.
___I would probably rather be like Margaret whom they said had high morals and put them into daily practice.
___I would probably rather be like Elizabeth whom they said was poised, gracious and pleasant to be with.
___I would definitely rather be like Elizabeth whom they said was poised, gracious and pleasant to be with.

HAD YOU RATHER HAVE THE TRAITS OF MARY OR OF ELIZABETH ATTRIBUTED TO YOU?

___I would definitely rather be like Mary whom they said was efficient and was going places in her field.
___I would probably rather be like Mary whom they said was efficient and was going places in her field.
___I would probably rather be like Elizabeth whom they said was poised, gracious and pleasant to be with.
___I would definitely rather be like Elizabeth whom they said was poised, gracious and pleasant to be with.

Question six

Two college girls were discussing whether or not they liked to play their favorite games in a spirit of competition

One girl said she did not like to play with a competitive spirit(unless it was purely a joking one) because she played entirely for fun and it would ruin the game to have to be thinking about the game and trying to win all the time.

The other girl said she thought an element of serious competition in a game wa a good thing because it gave her more incentive to play up to the best of her ability and to try to increase her skill.

WHICH OF THESE GIRL'S IDEAS ARE MOST LIKE YOUR OWN?

___I would definitely be more like the 1st girl who does not like to play with a serious competitve spirit because she played entirely for the fun of it.
___I would probably be more like the 1st girl who does not like to play with a serious competitive spirit because she played entirely for the fun of it.
___I would probably be more like the 2nd girl who likes an element of serious competition in a game because it made her try to increase her skill.
___I would definitely be more like the 2nd girl who likes an element of serious competition in a game because it made her try to increase her skil

A third girl entered the discussion and said that she liked an element of serious competition in a game because it made her stick to the rules and practice good sportsmanship --you learned to be a good loser as well as a good winner.

ARE YOUR OWN IDEAS ON THIS MORE LIKE THE 1st GIRL'S OR THE 3rd GIRL'S?

___I would definitely be more like the 1st girl who does not like to play with a serious competitive spirit because she played entirely for the fun of it.
___I would probably be more like the 1st girl who does not like to play with a serious competitive spirit because she played entirely for the fun of it.
___I would probably be more like the 3rd girl who liked an element of serious competition because it made her stick to the rules and practice good sportsmanship.
___I would definitely be more like the 3rd girl who liked an element of serious competition because it made her stick to the rules and practice good sportsmanship.

ARE YOUR OWN IDEAS ON THIS MORE LIKE THE 2nd GIRL'S OR THE 3rd GIRL'S?

___I would definitely be more like the 2nd girl who likes an element of serious competition because it made her try to increase her skill.
___I would probably be more like the 2nd girl who likes an element of serious competition because it made her try to increase her xxx skill.
___I would probably be more like the 3rd girl who liked an element of serious competition because it made her stick to the rules and practice good sportsmanship.
___I would definitely be more like the 3rd girl who liked an element of serious competition because it made her stick to the rules and practice good sportsmanship.

Question seven

Two girls in a dorm were discussing how they felt about the girls on the hall dropping in for a visit.

One girl said she enjoyed an occasional visit but in general the girls came in all too often when she was trying to get some work done and she was afraid she made it pretty plain that she didn't want to be interruped and have to talk to them.

The second girl said she loved for people to stop by and that she would be worried if the didn't. She said that unless she was really terribly pushed she was never too busy to stop and talk awhile.

WHICH OF THESE GIRLS' ATTITUDES IS MOST LIKE YOUR OWN?

___I would definitely be more like the 1st girl who said that the girls came in too often when she was trying to get some work done.
___I would probably be more like the 1st girl who said that the girls came in too often when she was trying to get some work done.
___I would probably be more like the 2nd girl who said she loved for people to stop by and was rarely toobusy to talk
___I would definitely be more like the 2nd girl who said she loved for people to stop by and was rarely too busy to talk

A third girl entered the discussion and said she didn't do much visiting hersel but that when somebody stopped by when she was busy she tried not to think of it as a waste of time but as a worthwhile experience.

IS YOUR OWN ATTITUDE MORE LIKE THE 1st GIRL'S OR THE ~~XX~~ 3rd GIRL'S?

___I would definitely be more like the 1st girl who said that the girls came in too often when she was trying to get some work done.
___I would probably be more like the 1st girl who said that the girls came in too often when she was trying to get some work done.
___I would probably be more like the 3rd girl who tried not to think of it as a waste of time but as a worthwhile experience.
___I would definitely be more like the 3rd girl who tried not to think of it as a waste of time but as a worthwhile experience.

IS YOUR OWN ATTITUDE MORE LIKE THE 2nd GIRL'S OR THE 3rd GIRL'S?

___I would definitely be more like the 2nd girl who said she loved for people to stop by and was rarely too busy to talk.
___I would probably be more like the 2nd girl who said she loved for people to stop by and was rarely too busy to talk.
___I would probably be more like the 3rd girl who tried not to think of it as a waste of time but as a worthwhile experience.
___I would definitely be more like the 3rd girl who tried not to think of it as a waste of time but as a worthwhile experience.

Question eight

Two girls, both of whom were average students, did not get to go home from college during the Thanksgiving holidays. The two girls did different things with their time.

One girl spent most of her time working on a term paper and doing some course reading because she ~~xxxxxxxxxxxxxxxxxxxxxxxx~~ knew she would do a better job if she worked over the holidays.

The other girl spent the holidays doing many things to round out her life which she didn't have time for when classes were in session. She read some serious literature, caught up on current ~~xxxxxx~~ affairs, listened to music and did other things that interested her.

IF YOU WERE IN THIS SITUATION WHICH OF THESE GIRLS WOULD YOU BE MORE LIKE?

___I would definitely be more like the 1st girl who spent her time on her course work so she could do a better job on it.
___I would probably be more like the 1st girl who spent her time on her course work so she could do a better job on it.
___I would probably be more like the 2nd girl who spent her time doing many things to round out her life.
___I would definitely be more like the 2nd girl who spent her time doing many things to round out her life.

A third girl who was also an average student and who was spending the holidays at school spent most of her time just letting down. She slept late, went to the movies, browsed around in the reading room and in general took life easy, because she felt she really needed a rest from the grind.

IF YOU WERE IN THIS SITUATION WOULD YOU BE MORE LIKE THE 1st GIRL OR THE 3rd GIRL?

___I would definitely be more like the 1st girl who spent her time on her course work so she could do a better job on it.
___I would probably be more like the 1st girl who spent her time on her course work so she could do a better job on it.
___I would probably be more like the 3rd girl who took life easy because she felt she really needed a rest from the grind.
___I would definitely be more like the 3rd girl who took life easy because she felt she really needed a rest from the grind.

IF YOU WERE IN THIS SITUATION WOULD YOU BE MORE LIKE THE 2nd GIRL OR THE 3rd GIRL?

___I would definitely be more like the 2nd girl who spent her time doing many things to round out her life.
___I would probably be more like the 2nd girl who spent her time doing many things to round out her life.
___I would probably be more like the 3rd girl who took life easy because she felt she really needed a rest from the grind.
___I would definitely be more like the 3rd girl who took life easy because she felt she really needed a rest from the grind.

Question nine

Three college girls went to Europe one summer. Prices were low enough for all of them to buy a good many artistic objects -- pictures, leather work, carvings, etc. The girls differed, however, in their reasons for buying them.

One girl said that although she would keep some of the things, she bought them primarily to give as wedding and Christmas presents.

The second girl said that she would use a few as girfts to special friends who would value them as much as she did, but that she had bought them primarily because she loved beautiful things and wanted to own them.

WHICH OF THESE GIRLS' REASONS WOULD BE MOST LIKE YOUR OWN?

___I would definitely be more like the 1st girl who bought the artistic objects to give as wedding and Christmas presents.
___I would probably be more like the 1st girl who bought the artistic objects to give as wedding and Christmas presents.
___I would probably be more like the 2nd girl who bought the artistic objects because she loved beautiful things and wanted to own them.
___I would definitely be more like the 2nd girl who bought the artistic objects because she loved beautiful things and wanted to own them.

The third girl said that she bought things from the different places she visited in Europe primarily because they would remind her of her various experiences on the trip whenever she looked at them.

WOULD YOUR OWN REASONS BE MORE LIKE THE 1st GIRL'S OR THE 3rd GIRLS?

___I would definitely be more like the 1st girl who bought the artistic objects to give as wedding and Christmas presents.
___I would probably be more like the 1st girl who bought the artistic objects to give as wedding and Christmas presents.
___I would probably be more like the 3rd girl who bought them to remind her of her various experiences on the trip.
~~xxxxIxxxxxxxxxxxxxxxxxxxxxx~~
___I would definitely be more like the 3rd girl who bought them to remind her of her various experiences on the trip.

WOULDY YOUR OWN REASNS BE MORE LIKE THE 2nd GIRL'S OR THE 3rd GIRL'S?

___I would definitely be more like the 2nd girl who bought the artistic objects because she loved beautiful things and wanted to own them.
___I would probably be more like the 2nd girl who bought the artistic objects because she loved beautiful things and wanted to own them.
___I would probably be more like the 3rd girl who bought them to remind her of her various experiences on the trip.
___I would probably be more like the 3rd girl who bought them to remind her of her various experiences on the trip.

Question ten

It was late at night and the bull session was getting serious. Three college girls' conversation had turned to a very general subject which you might call their "philosophy of life".

The first girl said: "I think the main thing in life is "adjustment". A person should be well adjusted in life and well balanced. One should not ask for more than she can have and she should be able to take life as it comes".

The second girl said she didn't agree with this. She said: "If you make adjustment the most important thing you will never do anything creative or achieve anything of importance. I believe that throughout life a person should always set higher and higher goals for herself and strive to attain them. She should take advantage of her opportunities and try to make something of herself.

WHICH OF THESE GIRLS DO YOU MOST AGREE WITH?

___I definitely agree with the 1st girl who thinks a person should be well adjusted and well balanced.
___I probably agree with the 1st girl who thinks a person should be well adjusted and well balanced.
___I probably agree with the 2nd girl who thinks a person should always set higher and higher goals for herself and strive to attain them.
___I definitely agree with the 2nd girl who thinks a person should always set higher and higher goals for herself and strive to attain them.

The third girl said she did not agree with either of the others. She said: "I think too much emphasis is put on striving for this and that and adjusting to life. To me life was put here to be enjoyed and appreciated. One should get pleasure out of living, not work at it. Life is so short and so few people really appreciate its offerings."

DO YOU AGREE MORE WITH THE 1st GIRL OR THE 3rd GIRL?

___I definitely agree with the 1st girl who thinks a person should be well adjusted and well balanced.
___I probably agree with the 1st girl who thinks a person should be well adjusted and well balanced.
___I probably agree with the 3rd girl who thinks life was put here to be enjoyed and appreciated.
___I definitely agree with the 3rd girl who thinks life was put here to be enjoyed and appreciated.

DO YOU AGREE MORE WITH THE 2nd GIRL OR THE 3rd GIRL?

___I definitely agree with the 2nd girl who thinks a person should always set higher and higher goals for herself and strive to attain them.
___I probably agree with the 2nd girl who thinks a person should always set higher and higher goals for herself and strive to attain them.
___I probably agree with the 3rd girl who thinks life was put here to be enjoyed and appreciated.
___I definitely agree with the 3rd girl who thinks life was put here to be enjoyed and appreciated.

Questre. #3.

Interviewer's name_____ Case no____

BACKGROUND QUESTIONS

1- Home address:
Town, or if rural, county_____
State_____or country if other than U.S._____

2- here have you lived the most part of your life?
Town, or if rural, county_____
State_____or country if other than U.S._____

3- Age at last birthday:____years.

4- Marital status: married____; single____; engaged____.

5- Religious preference:
Catholic_____
Jewish _____
Protestant _____What denomination?_____

6- Major at WC: _____

7- Is your father:
Living____Where?(town or county, state)_____
Dead ____When? (year)_____
Divorced from your mother_____When? (year)

8- Is your mother:
Living____Where? (town or county, state)_____
Dead ____When? (year)

9- Please list the ages of your sisters, beginning with the oldest (living)

_____,_____,_____,_____,_____,_____,

none_____

10-Please list the ages of your brothers, beginning with the oldest (living)

_____,_____,_____,_____,_____,_____,

none_____

11- Mother's education:
___attended grammar school
___attended high school
___finished high school
___attended college or business or trade school after high school
___college graduate
___graduate or professional school

12- Has your mother had a full-time paying job outside of the home for at least two years at any time in the last ten years?
___yes, for _____years
___no

13- If she did have a job, tell exactly what kind of job? Where? Doing exactly what?

_____

_____

Interviewer's initials_____ Case no____

14- Give the names of the three clubs or organizations that your mother is most active in:

_____

_____

_____

15- How active is she in these clubs or organizations?

___extremely active
___very active
___moderately active
___only slightly active

16- Father's education:

___attended grammar school
___attended high school
___finished high school
___attended college or business or trade school after high school
___college graduate
___graduate or professional school

17- What is your father's occupation? Please describe in detail. If he does more than one thing tell about each job and then underline the one from which he derives the most yearly income.

GO ON TO THE NEXT PAGE

The following questions will consist of descriptions of some real life situations in which a choice must be made between two alternatives. There are no right or wrong answers. Some people will choose one alternative and other people will choose the other. (Please read all of the question before checking and make sure you check where you mean to check)

1- Anne is a senior and a physics major in college. She has done outstanding work in that field and plans to go on to graduate school. Her family is financially able to send her to any school she chooses. Anne wants very much to go to a large university located more than 1000 miles from her home, because it has the best physics department in the country and is the only place that offers the particular courses she wants. Her mother, however, is in poor health and Anne's father has told her that her mother would rest much easier and be happier if Anne went to a nearby university for her graduate work. Anne debates:

Should she go to the far away university in order to take advantage of the best training available and to get the particular courses she wants?

Or should she go to a nearby university in order to have her mother rest easier and be happier?

IF YOU WERE IN ANNE'S SITUATION WHICH WOULD YOU DO?

___I would definitely go to the far away university
___I would probably go to the far away university
___I would probably go to a nearby university
___I would definitely go to a nearby university

2- Two girls had roomed together in college and were very close friends. After graduation they took civil service jobs in the same agency and were sent to a small out of the way town where nothing of interest was going on. The girls made the best of things and enjoyed each other but the town itself was dull. They both applied for a transfer but only one of the girl's applications went through. She has a chance to fill the only vacancy in an office located in a city some distance away. Knowing that it would be highly unlikely that her friend could get transferred to this same office, she wonders what to do?

Should she accept the transfer and go to the city where she will have many more cultural and recreational opportunities, even though it means leaving her friend behind?

Or should she refuse the transfer out of consideration for her friend, whom she does not want to leave stranded in this dull town, and hope that eventually both of them can be transferred to another place together.

IF YOU WERE IN THIS SITUATION WHICH WOULD YOU DO?

___I would definitely accept the transfer and go to the city
___I would probably accept the transfer and go to the city
___I would probably refuse the transfer and stay on in the town
___I would definitely refuse the transfer and stay on in the town

3- Betty's parents had been able to pay for all her college expenses. Now after graduation, Betty is planning to work and save every penny toward putting herself through graduate school. Betty's younger sister, Jane, is going to enter college in the fall, but the family has suffered a serious financial set-back and can only pay for Jane's tuition and nothing else. Betty is faced with this problem as she sees it:

Since she did not have to work while at college, she should put off her plans for graduate school indefinitely and send her extra money to help pay Jane's expenses above tuition.

Or, since Jane can work and earn her expenses above tuition, Betty should not jeopardize her own career, and should go right on saving her money for graduate work.

IF YOU WERE IN BETTY'S SITUATION WHICH WOULD YOU DO?

____I would definitely send the money to Jane
____I would probably send the money to Jane
____I would probably save the money for graduate school
____I would definitely save the money for graduate school

4- Margaret is a math major and makes top grades in her class. Two of her friends who live down the hall are also majoring in math. On the night before the final exam they come in and ask her to explain some complex new material they had been given toward the end of the semester. They say they hadn't worried much about it before because they thought they could figure it out tonight, but they can't, and they are afraid they will not do well on the exam if they don't master it. Now Margaret has been studying hard all term and hopes to make an "A" in the course. She is not planning to go over the new material tonight because she had known it was difficult and had worked hard to learn it earlier. Instead, she is planning to review the first part of the course and then go to bed early so she will be fresh for the exam. She knows that it will take several hours or more to explain the new material to her friends. She hesitates before answering them and thinks:

Should she give up her own study plans and devote several hours to explaining the material she has already mastered to her friends so they won't fall down on the exam?

Or should she keep on with her own study plans and tell her friends that although she would have helped them earlier she just can't help them tonight? She would do this because she feels she should not endanger her own chances for doing well just because her friends didn't do their studying early enough.

IF YOU WERE IN MARGARET'S SITUATION WHICH WOULD YOU DO?

____I would definitely help my friends
____I would probably help my friends
____I would probably go on with my own study plans
____I would definitely go on with my own study plans

5- Susan is a business major in college. She hopes to get a job in a large office and work up to a position as private secretary to a big businessman. Susan is from a small town and although she can get a job at home she knows that the kind of job she really wants can only be found in a city. At the end of Susan's senior year, it is found that her mother has tuberculosis and will have to go to a sanatorium for an indefinite length of time. This will leave Susan's father to care for the house and her little brother of 12. Her father is financially able to hire someone to care for the house and her little brother, but Susan feels that both her father and her brother need her at home. Susan has to decide:

Whether she should give up her ambition to become a private secretary to a big businessman and stay at home in order to help her family.

Or whether she owes it to herself to go on with her plans since perhaps a good servant would be just as much help as she would be to her father and brother.

IF YOU WERE IN SUSAN'S SITUATION WHICH WOULD YOU DO?

___I would definitely stay at home
___I would probably stay at home
___I would probably go on to the city
___I would definitely go on to the city

6- Mary is majoring in chemistry and is doing excellent work in a lab course. In fact, she does so well that there is a considerable gap between her grades and the next highest, and this means that she always gets the only "A" in the class. She has come to feel the resentment of her friends in the class who feel that they could make "A's" too if she weren't so far out in front. She is very worried by this situation and wavers between two alternatives:

Should she continue to work up to her top capacity even though it may be hurting her friends' chances for getting "A's" because she believes that a person should do her work up to the best of her ability?

Or should she lower her standards a little and not make such outstanding grades because she believes that consideration for one's friends is more important than always working at top capacity?

IF YOU WERE IN MARY'S SITUATION WHICH WOULD YOU DO?

___I would definitely continue to work at top capacity
___I would probably continue to work at top capacity
___I would probably lower my standards a little
___I would definitely lower my standards a little

7- Frances and Joan are seniors in college. They are both planning to work several years before they get married. The two girls have different reasons, however, for planning to work:

Frances wants to work because she is looking forward to a few years of being independent and on her own. She feels that she had rather not marry until she has had the experience of doing something successfully in her own right.

Joan does not especially want to work before she gets married, but she plans to do so because she feels she owes it to her parents. Her parents feel that since they have sent her through college to prepare her for a job that she should work at least a few years to utilize her training.

IF YOU WERE PLANNING TO WORK SEVERAL YEARS BEFORE GETTING MARRIED, WHICH GIRL'S REASONS FOR WORKING WOULD BE MORE LIKE YOUR OWN?

____I would want to work definitely for the experience of doing something successfully in my own right
____I would want to work probably for the experience of doing something successfully in my own right
____I would want to work probably to satisfy my parents
____I would want to work definitely to satisfy my parents

8- Two college professors' wives both have 10 and 12 year old children and also have part time jobs outside of the home. They have different reasons, however, for working:

Mrs. Jones says that the only reason she is working is to supplement the family income. She says that she does not like to work and that she had much rather spend her time taking care of her children. If she did not feel that the family needed the money she earned she would gladly stop working.

Mrs. Brown says that she is also working because the family needs the income, but that actually this has given her the opportunity to do what she prefers to do anyway. She says that she had rather work than stay at home with the children all the time.

IF YOU WERE IN THIS SITUATION, WHICH WIFE'S REASONS FOR WORKING WOULD BE MORELIKE YOUR OWN?

____I would definitely agree with Mrs. Jones who says the only reason she is working is to supplement the family income.
____I would probably agree with Mrs. Jones who says the onlyreason she is working is to supplement the family income.
____I would probably agree with Mrs. Brown who says that the family's needing the extra income has given her the opportunity to do what she prefers to do anyway.
____I would definitely agree with Mrs. Brown who says that the family's needing the extra income has given her the opportunity to do what she prefers to do anyway.

9- Two married women whose children are all in high school have been working as secretaries for about a year. They both like their jobs very much. With the money they are paid they buy clothes for themselves and their children and employ someone to do their housework for them. Their husbands, however, object to this arrangement because they think the mothers should be at home at lunch time and in the afternoons when the children come in from school. They think the mothers should give up their jobs because they ought to be at home at these times. They leave the final decision up to the mothers:

One mother decides to give up her job as her husband wishes (even though she doesn't want to) so that she can always be at home when the children come in.

The other mother points out to her husband that the children are being well looked after, that she sees them at supper and at night and that therefore, since she likes working, she intends to continue at her job.

IF YOU WERE IN THIS SITUATION WHICH WOULD YOU DO?

____I would definitely give up the job
____I would probably give up the job
____I would probably continue at the job
____I would definitely continue at the job

10- Jean's husband is in the insurance business and since their marriage she has been helping him with his paper work at the office. But Jean had majored in art at college and now she has her big chance. She is offered a job designing book jackets for a publishing company in the city where she had worked at a less interesting job before she was married. She wants very much to take this job because it is work she enjoys and has been trained for and her husband's office work is tedious and uninteresting. Her husband, however, would like for her to continue helping him because he feels that she has learned the ropes and has the best interests of the business at heart. He doesn't want to have to train a new assistant and thinks that an "outsider" would never be as conscientious as Jean. He admits that strictly financially they would come out about even either way. He leaves the final decision up to Jean, who debates:

Should she take the designing job because it is work that she especially likes and that would give her a greater sense of personal accomplishment?

Or should she refuse the designing job and continue to help her husband since that would make things easier for him?

IF YOU WERE IN JEAN'S SITUATION WHICH WOULD YOU DO?

____I would definitely take the designing job
____I would probably take the designing job
____I would probably continue helping my husband
____I would definitely continue helping my husband

11- Mrs. X is married and has two children beginning high school. After several years of serving on the local and state executive boards of the AAUW (American Assn. of University Women) she has now been appointed to the national executive committee of this organization. She is very proud of having worked her way up to this position and wants to accept it. She is worried, however, over whether she should take on a job that would require the major portion of her time and necessitate frequent absenses from home since she has her two high school aged children to think about. She is financially able to hire a servant but she wonders:

Should she accept the position and hire a servant to relieve her of some of her home duties because she feels that she should pursue the work that she is most interested in and has shown herself to be superior in?

Or should she refuse the position (even though she would like to have it) because she feels she owes it to her husband and children to devote the major portion of her time to them?

IF YOU WERE IN MRS. X's SITUATION WHICH WOULD YOU DO?

____I would definitely accept the position
____I would probably accept the position
____I would probably refuse the position
____I would definitely refuse the position

12- Mrs. X wakes up with a cold. Her husband had been planning for them to go on a fishing trip together that day. She does not like to fish and she would like to stay at home and get rid of her cold. Her husband, however, although he would understand, would be very disappointed if she didn't go, for he enjoys taking her on his infrequent fishing trips so much. Mrs. X debates:

Should she go with him in order not to disappoint him even at the risk of getting a worse cold?

Or should she stay at home and take care of herself and plan to go with him on his next trip?

IF YOU WERE IN MRS. X's SITUATION WHICH WOULD YOU DO?

____I would definitely go with him
____I would probably go with him
____I would probably stay at home
____I would definitely stay at home

NOW THESE NEXT QUESTIONS WILL BE A LITTLE DIFFERENT
BUT THERE CAN STILL BE NO RIGHT OR WRONG ANSWERS

1- Suppose that two events are scheduled for the same hours at the college. One is a party given by your dorm for the girls in another dorm and the other is a lecture by a well known person in your field.

IF YOU HAD TO CHOOSE BETWEEN THESE EVENTS, WHICH WOULD YOU ATTEND?

___I would definitely attend the dorm party
___I would probably attend the dorm party
___I would probably attend the lecture
___I would definitely attend the lecture

2- Suppose that in the college annual a little is written about each of the graduating seniors.

Mary is described this way: "With her efficiency and resourcefulness she gets things done. She makes honor grades and is going places in her field."

Jane, another senior, is described this way: "She is poised and charming and always pleasant to be with."

WHICH OF THESE GIRLS HAD YOU RATHER BE LIKE?

___I had definitely rather be like Mary who is going places in her field.
___I had probably rather be like Mary who is going places in her field.
___I had probably rather be like Jane who is always pleasant to be with.
___I had definitely rather be like Jane who is always pleasant to be with.

3- With finals over and graduation day ahead, two seniors are looking back on their college life and begin talking about why they are glad they came to college.

One girl says she is glad she came to college because she has learned so much that will be of help to her in one way or another throughout life.

The other girl says she is glad she came to college because of the wonderful friendships she has made and the good times she and her friends have had together.

IF YOU WERE LOOKING BACK ON YOUR COLLEGE LIFE WHICH GIRL WOULD YOU MOST AGREE WITH?

___I would definitely agree with the first girl who is glad she came to college because she learned so much
___I would probably agree with the first girl who is glad she came to college because she learned so much
___I would probably agree with the second girl who is glad she came to college because of the wonderful friendships she made
___I would definitely agree with the second girl who is glad she came to college because of the wonderful friendships she made

4- Two college girls are planning to teach in elementary school, but they want to teach for somewhat different reasons.

One girl says: "I want to teach in elementary school because I love little children and they love their teachers. It is so wonderfully satisfying the way they respond to you and appreciate every little thing you do."

The other girl says: "I want to teach in elementary school because education is a vital force in the world today and I want to be in on the ground floor. If children aren't taught to think early in the game a higher education just won't 'take' with them."

IF YOU WERE PLANNING TO TEACH IN ELEMENTARY SCHOOL WHICH GIRL'S REASONS FOR WANTING TO TEACH WOULD YOU MOST AGREE WITH?

___I would definitely agree with the first girl who wants to teach because she loves little children and the way they respond to their teachers
___I would probably agree with the first girl who wants to teach because she loves little children and the way they respond to their teachers
___I would probably agree with the second girl who wants to teach because she believes children should be trained to <u>think</u> early in the game
___I would definitely agree with the second girl who wants to teach because she believes children should be trained to <u>think</u> early in the game

5- Two college girls are discussing their reasons for attending a "get-together" to which majors in their department have been invited by the same department in a nearby girls' school.

One girl says she is going because she likes to meet and mix with people. She enjoys talking to them and just likes to be sociable.

The other girl says she is going because she wants to talk "shop" with others in her field. She wants to find out how their department differs from her own and perhaps learn something more about job opportunities in her field.

IF YOU WERE GOING TO THIS GET-TOGETHER WHICH GIRL'S REASONS FOR GOING WOULD YOU MOST AGREE WITH?

___I would definitely agree with the first girl who is going because she likes being sociable.
___I would probably agree with the first girl who is going because she likes being sociable.
___I would probably agree with the second girl who is going in order to talk "shop".
___I would definitely agree with the second girl who is going in order to talk "shop".

Interviewer's initials_____Case no___

6- Two college girls are planning to be nurses in a large hospital. They have somewhat different reasons, however, for choosing this occupation. (Now you probably do not plan to be a nurse, but imagine for the moment that you do)

One girl wants to be a nurse because she thinks she would enjoy her relationship with her patients. She feels that since nurses are the most important people in the lives of hospitalized patients that nurses are in a position to do so much to make them happy and content and the patients in turn are so appreciative of understanding and attentive nurses.

The other girl wants to be a nurse because she is interested in the medical field. She wants to be in on the discussion of cases, watch operations and in general participate as much as possible in the more strictly medical and technical aspects of her job.

IF YOU WANTED TO BE A NURSE, WHICH GIRL'S REASONS FOR CHOOSING THIS OCCUPATION WOULD YOU MOST AGREE WITH?

___I would definitely agree with the first girl who thinks she would enjoy her relationship with her patients
___I would probably agree with the first girl who thinks she would enjoy her relationship with her patients
___I would probably agree with the second girl who is interested in the more strictly medical aspects of the field
___I would definitely agree with the second girl who is interested in the more strictly medical aspects of the field

7- Two girls in a dorm are discussing how they feel about the girls on the hall dropping in to visit with them.

One girl says that she enjoys these visits up to a point, but that sometimes the girls come in just to make small talk when she is trying to get some work done. Although she does stop and talk she says she can't help being eager to quit the small talk and get back to work.

The other girl says that she loves for the girls to stop by anytime for a visit. She says that it would be a rare day indeed if she was so busy that she couldn't enjoy sharing some small talk with the girls on the hall who stop by.

IF YOU WERE IN THIS DISCUSSION WHICH GIRL WOULD YOU MOST AGREE WITH?

___I would definitely agree with the first girl who says that sometimes when the girls come in she can't help being eager to quit the small talk and get back to work.
___I would probably agree with the first girl who says that sometimes when the girls come in she can't help being eager to quit the small talk and get back to work.
___I would probably agree with the second girl who says it would be a rare day indeed if she was so busy that she couldn't enjoy sharing some small talk
___I would definitely agree with the second girl who says it would be a rare day indeed if she was so busy that she couldn't enjoy sharing some small talk

Interviewer's initials_____ Case no____

8- Two college girls get into a discussion about why they like people.

One girl says she likes people because she likes to try to figure them out, analyze them. She says that you can learn a lot from people too, that you can never get in books.

The other girl says that she doesn't have a "reason" for liking people, she just likes them. She says she just enjoys people without wanting to analyze them or learn from them.

IF YOU WERE IN THIS DISCUSSION, WHICH GIRL WOULD YOU MOST AGREE WITH?

___I would definitely agree with the first girl who likes people because she likes to try to analyze them and learn from them
___I would probably agree with the first girl who likes people because she likes to try to analyze them and learn from them
___I would probably agree with the second girl who doesn't have a reason for liking people, she just enjoys them
___I would definitely agree with the second girl who doesn't have a reason for liking people, she just enjoys them

9- Two girls are planning to get jobs as technicians in a large lab where they will be working alongside of but not directly with other people. They begin to talk about the other girls who will also be working there.

One girl says she hopes she likes the other girls. She says she would not be happy at her job unless she really liked the people she was working alongside of and felt that they liked her.

The other girl says that she can usually get along with anybody if necessary and that as long as she liked her work it would not matter a great deal to her how she felt about the other girls.

IF YOU WERE PLANNING TO BE A LAB TECHNICIAN, WHICH GIRL'S ATTITUDE WOULD YOU MOST AGREE WITH?

___I would definitely agree with the first girl who says she would not be happy at her job unless she really liked the other girls
___I would probably agree with the first girl who says she would not be happy at her job unless she really liked the other girls
___I would probably agree with the second girl who says that as long as she liked her work it would not matter a great deal to her how she felt about the other girls
___I would definitely agree with the second girl who says that as long as she liked her work it would not matter a great deal to her how she felt about the other girls

Interviewer's initials_____Case no____

10- Two girls are planning to go to Europe next summer. They have somewhat different reasons, however, for wanting to go.

One girl says she wants to go to Europe in order to learn about present conditions over there and to find out more about Europe in general. She says that traveling is one of the best learning experiences anyone could have.

The other girl says she intends to learn from her trip too, but that traveling for her would mean mainly pleasure. She wants to meet some of the people and just drink it all in.

IF YOU WERE PLANNING TO GO TO EUROPE WHICH GIRL'S REASONS FOR WANTING TO GO WOULD YUU MOST AGREE WITH?

____I would definitely agree with the first girl who wants to go to Europe to find out about present conditions over there and to learn more about Europe in general
____I would probably agree with the first girl who wants to go to Europe to find out about present conditions over there and to learn more about Europe in general
____I would probably agree with the second girl who wants to go to Europe in order to learn but mainly because she would enjoy it.
____I would definitely agree with the second girl who wants to go to Europe in order to learn but mainly because she would enjoy it

11- Two college girls get to talking one day about what they want their children to be like. They have somewhat different ways of thinking about it:

One girl says: "When I think about what I want in children I think about what I want them to be like as adults. I want them to learn the meaning of discipline -- that they can't have everything they want or do everything they want. Only if they learn this will they be able to make something of themselves when they are grown."

The other girl says: "I want a couple of nice kids who are sweet and cheerful and make us happy. I don't hink children should be allowed to run completely wild, but childhood is a time for play and getting a kick out of things and I don't want my children to miss out on it."

IF YOU WERE IN THIS DISCUSSION WHICH GIRL WOULD YOU MOST AGREE WITH?

____I would definitely agree with the first girl who wants her children to learn the meaning of discipline
____I would probably agree with the first girl who wants her children to learn the meaning of discipline
____I would probably agree with the second girl who wants her children to get a kick out of things in childhood
____I would definitely agree with the second girl who wants her children to get a kick out of things in childhood

Interviewer's initials_____Case no____

12- It is late at night and the conversation is getting serious. Two college girls' conversation turns to a very general subject which you migh t call their "philosophy of life"

One girl says: "I believe that throughout life a person should always set higher and higher goals for herself and strive to attain them. She should take advantage of her opportunities and try to make something of herself."

The other girl says: "I think too much emphasis is put on striving for goals. To me life was put here to be enjoyed and appreciated. One should get pleasure out of living, not work at it. Life is so short and so few people really appreciate its offerings."

IF YOU WERE IN THIS DISCUSSION WHICH GIRL WOULD YOU MOST AGREE WITH?

____I would definitely agree with the first girl who thinks a person should always set higher and higher goals for herself and strive to attain them.

____I would probably agree with the first girl who thinks a person should always set higher and higher goals for herself and strive to attain them

____I would probably agree with the second girl who thinks life was put here to be enjoyed and appreciated.

____I would definitely agree with the second girl who thinks life was put here to be enjoyed and appreciated.

(Please check to see if you have answered all the questions up to here)

NOW IF YOU WILL GIVE THIS BACK TO THE INTERVIEWER, SHE WILL ASK YOU A FEW FINAL QUESTIONS.

Interviewer's initials_____Case no___

QUESTIONS TO BE ASKED BY THE INTERVIEWER (Instructions to interviewer are in parentheses)

1- What are the three clubs or organizations on campus that you devote the most time to?
Do you hold an office in any of these clubs? If so, what office?
Approximately how many hours a week do you devote to each of these organizations?

Name of club or organization	Office held if any	Approx. hrs. per w
_____	_____	_____
_____	_____	_____
_____	_____	_____

NOW HERE ARE SOME QUESTIONS ABOUT YOUR FUTURE PLANS -- FIRST A RATHER GENERAL ONE (Phrase the following question exactly as printed here)

2- Try to think of all the things you hope to do in life. Now what is the one thing you hope to do that would bring you the greatest sense of self satisfaction

(Record her answer word for word, putting probes in parentheses)

Do you feel that doing this would be enough to bring you a complete sense of self satisfaction? (If she says "no", ask:) What else?

Do you feel that doing these two things would be enough to bring you complete self satisfaction? (If she says "no", ask:) What else?

SOME OF THESE NEXT QUESTIONS MAY COVER THINGS YOU HAVE ALREADY SAID, BUT WE WANT TO ASK YOU ABOUT THEM SPECIFICALLY.

3- Suppose you were married and had no children. You and your husband agree that his income is adequate to support you and even to put some money aside. Under these circumstances, which of the following activities, besides housework, had you rather devote most of your time to: (Check only one)

1____part time job outside of the home
2____full time job outside of the home
3____community club work and/or church work
4____an active social life
5____doing things at home that especially interest me _____

(If she chooses the last one, ask:) What sort of things?

4-If all conditions were ideal, exactly what occupation would you really like to have?
(if she says "mother" or "housewife" record, and then ask, "Besides this do you have any money making job in mind that you would really like to have?")

Well, that is the job you would like if all conditions were ideal, now what occupation are you realistically hoping for?
(if she says "mother" or "housewife" record, then ask for money making job)
(get her to be as specific as possible)

(If the first job mentioned is different from the second job, ask:)
Why don't you expect to have the first job you mentioned?
(record answer word for word, if only one reason is given ask for others)

5-Now assume that you are going to get married and are going to have children. Also assume that you would not absolutely have to work at any time in order to help support the family. Now tell me at which of the following times you would like to have a full time paying job outside of the home.
(Check as many times as necessary)

___after you are married and before you have children
___after your children are old enough to go to school
___after your children get in high school
___after your children leave home for college, marriage, or jobs
___don't want a full time job at any time after marriage

6-About how many children do you think you would like t o have?_____

7-Could you tell me what your main reasons for having children would be?

8-Now this is the last question. As you think back over this questionnaire which one of your parents do you feel your ideas and attitudes are most like.
(Try to get her to decide between mother and father)

___mother
___father
___neither
___both

Approved by

Miriam Massey Johnson
Director

Examining Committee

Lyda Gordon Shivers

Sara E. Smith

Emily Holmes Watkins